# NORTH DAKOTA

# NPS POLLUTION MANAGEMENT PROGRAM

# FISCAL YEAR 2002 ANNUAL REPORT

**November 1, 2001 - October 31, 2002**

# Contents



## Tables



## Figures

NORTH DAKOTA NPS POLLUTION MANAGEMENT PROGRAM
FISCAL YEAR 2002 ANNUAL REPORT
11/01/01 - 10/31/02

# I. Introduction

Since 1990, the North Dakota NPS Pollution Management Program has received $31,073,107 in Section 319 funding (Table 1) to support NPS Program personnel and over 90 locally sponsored projects. Approximately, 10% of these funds have been secured to for NPS Program staffing and support. The balance of the funds, 90%, have been allocated to locally sponsored projects focused on NPS pollution control or assessment.

**Table 1.** Annual Section 319 Allocations & Non-Federal Match Commitments

| Fiscal Year | 319 Allocation | State/Local Match | Annual Budget |
|---|---|---|---|
| 90 | $667,700 | $445,133 | $1,112,833 |
| 91 | 568,780 | 379,187 | 947,967 |
| 92 | 618,614 | 412,409 | 1,031,023 |
| 93 | 460,267 | 306,845 | 767,112 |
| 94 | 882,198 | 588,132 | 1,470,330 |
| 95 | 886,920 | 591,280 | 1,478,200 |
| 96 | 1,387,260 | 924,840 | 2,312,100 |
| 97 | 2,403,984 | 1,602,656 | 4,006,640 |
| 98 | 2,403,984 | 1,602,656 | 4,006,640 |
| 99 | 4,821,000 | 3,214,000 | 8,035,000 |
| 00 | 4,776,400 | 3,184,267 | 7,960,667 |
| 01 | 5,598,000 | 3,732,000 | 9,330,000 |
| 02 | 5,598,000 | 3,732,000 | 9,330,000 |
| **TOTAL** | **$31,073,107** | **$20,715,405** | **$51,788,512** |

State and local projects supported with Section 319 funding can generally be placed under one of three different project categories. These project categories are: 1) development phase projects; 2)

educational projects; and 3) watershed projects. Although most projects clearly fit into one of these categories, several projects do include components from all three categories.

The primary purposes of development phase projects are to identify beneficial use impairments or threats within specific waterbodies and determine the extent to which those threats or impairments are due to NPS pollution. Work activities during a development phase project generally involve an inventory of existing data and supplemental monitoring, as needed, to allow an accurate assessment of the targeted waterbody and its watershed. Through these efforts the local project sponsors are able to: 1) determine the extent to which beneficial uses are being impaired; 2) identify specific sources and causes of the impairments; 3) establish preliminary pollutant reduction goals or TMDL endpoints; and 4) identify management measures needed to address pollutant sources and restore or maintain the beneficial uses of the waterbody. Development phase projects are generally one to two years in length.

Educational projects, as the name implies, are designed to disseminate information on various NPS pollution issues. The focus of these educational efforts may range from a specific source or cause of NPS pollution to management solutions that can be used to reduce NPS pollution. Educational tools typically used by the sponsoring entities include brochures, all media (TV, radio, newspaper, etc.), workshops, "how to" manuals, tours, exhibits, and demonstrations. These projects are generally one to five years in length.

The watershed projects are the most comprehensive projects currently implemented through the NPS Pollution Management Program. These projects are typically long-term efforts designed to address documented NPS pollution impacts and beneficial use impairments within priority watersheds. Common objectives for watershed projects include; 1) protection and/or restoration of impaired beneficial uses through voluntary implementation of best management practices; 2) dissemination of information on local NPS pollution concerns and effective solutions to those concerns; and 3) evaluation of progress toward identified use attainment or NPS pollutant reduction goals. Watershed projects are generally five to ten years in length, depending on the size of the watershed and extent of NPS pollution impacts.

The North Dakota Nonpoint Source Pollution Management Program continues to be a voluntary program directed toward locally sponsored initiatives that strive to reduce/prevent NPS pollution impacts to the beneficial uses of the state's water resources. To emphasize this "local focus"and more clearly define the long-term direction of the NPS Program, the ND Department of Health (NDDH) updated the state's NPS Pollution Management Program Plan (Management Plan) in 1999. The updated Management Plan was fully approved by EPA on October 28, 1999. Updates to the Management Plan included; 1) establishing a Program mission statement and long-term goal; 2) describing key components of the Program; and 3) identifying specific objectives and tasks that need to be completed to achieve the goal of the NPS Program. The mission statement and long-term goal are as follows:

North Dakota NPS Program Mission: "To protect or restore the chemical, physical, and biological integrity of the waters of the state by promoting locally sponsored, incentive based, voluntary programs where those waters are threatened or impaired due to nonpoint sources of pollution."

North Dakota NPS Management Program Long-term Goal: "To initiate a balanced program focused on the restoration and maintenance of the beneficial uses of the State's water resources (i.e. streams, rivers, lakes, reservoirs, wetlands, aquifers) impaired by NPS pollution."

To allow closer evaluation of accomplishments and progress toward NPS Program goals, the annual report format was also revised in January 2000. Starting with the 2000 annual report, the "start date" for all future reports is November 1999. This date is consistent with the approval date for the updated Management Plan. Program progress prior to November 1999 is reflected in annual reports previously submitted to EPA. The "end date" for future reports will be dependant on the specific reporting year (e.g., October 31, 2001, October 31,2002, etc.). This section, Section I, provides a general description of the structure and goals of the NPS Program. Sections II through VII of the new report format discuss the cumulative accomplishments associated with each component of the Management Plan. Information in each section will generally include a discussion on the accomplishments related to the applicable Program goal and a brief status report for the tasks associated with the objectives. The six major components of the Management Plan that will be addressed in this report are as follows:

- Resource Assessment - This section addresses the NPS Program's existing inventory/assessment system and future needs to improve or expand assessment efforts.

- Prioritization - This section discusses existing and future prioritization methods or strategies within the NPS Program.

- Assistance - This section focuses on "how" the financial and technical assistance available through the Program will be delivered to state/local project sponsors.

- Coordination - Development and maintenance of partnerships with private and local/state/federal agencies and organizations are described in this section.

- Information/Education - The Program's multi-year strategy for public outreach and information dissemination is described under this section.

- Evaluation/Monitoring - Program and local project evaluation/monitoring efforts are addressed in this section.

## II. Resource Assessment

**Resource Assessment Goal:** To accurately and thoroughly assess beneficial use support and the sources and causes of use impairments within the state's watersheds.

Resource assessment is currently being accomplished at the state and local level to evaluate progress and/or NPS pollution management needs. On a statewide basis, NDDH staff utilize data (e.g., water quality, biological, etc.) collected by state and local staff to periodically evaluate trends in the water quality and beneficial uses of numerous waterbodies throughout the state. At the local level, financial and technical assistance continues to be provided to resource managers to assess beneficial use impairments within specific waterbodies or measure benefits resulting from applied BMP. To ensure the interpretations of the sources and causes of beneficial use impairments are accurate and consistent between statewide and local level assessments, the NDDH is also directly involved in ongoing efforts to delineate and digitize the 12 digit hydrologic units throughout the state.

The FY99 Unified Watershed Assessment and 305(b) Reports are the primary statewide assessment documents/reports utilized during initial watershed planning efforts. Information in these documents is being used to establish priority areas; determine general resource management needs; and identify areas needing additional data. Future 305(b) Reports will also be used to evaluate the long term success of the ND NPS Program. These documents are available on the NDDH web site www.health.state.nd.us..

Over the past year, the NDDH has also employed additional staff to coordinate the development of total maximum daily loads for waterbodies on the 303(d) list (i.e., TMDL List). Through the efforts of these individuals, local resource managers have become more aware of the TMDL process/program and are now using the TMDL List increasingly more to establish local NPS pollution assessment priorities. Consequently, it is expected that a greater portion of future Section 319 financial support for assessment level projects will be directed to waterbodies identified on the TMDL List. Table 2 identifies the previous and current NPS pollution assessment projects that will result in the development of a TMDL.

Local NPS pollution assessment projects continue to be the primary means used by the NDDH and local sponsors to further define subwatershed priorities (i.e., Tier III, Tier II,) and determine specific management measures. These assessments, commonly referred to as "development phase projects," provide the foundation for all watershed projects by identifying specific sources and causes the NPS pollutants impairing or threatening a waterbody's beneficial uses. Data collected during a development phase project is used to redefine the waterbody's priority ranking (e.g., elevate from a Tier II to Tier I ranking) as well as to develop a multi-year watershed project implementation plan (PIP) that addresses the identified beneficial use impairments. When applicable, NDDH staff also coordinate with the local sponsors to utilize the assessment data to develop TMDLs.

Since November 1999, nineteen assessment or development phase projects have been active and/or initiated in the state. Basic goals of these projects include the identification of; 1) beneficial use impairments or threats; 2) sources and causes of the impairments; and 3) specific corrective measures needed to address the documented NPS pollution impacts. These local assessments have generally included water quality and biological (e.g., macroinvertebrates) monitoring; stream discharge measurement; landuse inventories; and riparian assessments. At the conclusion of each assessment/development phase project, NPS Program staff and the local sponsors determine the Tier ranking of the watersheds and develop a NPS assessment report and/or TMDL. These reports identify specific use impairments, pollutant sources and causes, as well as future management needs and goals. All NPS assessment reports are maintained on file at the NDDH and local project offices. Table 2 lists the active or completed assessment projects during the period of November 1, 1999 through October 31, 2002.

**Table 2.** Summary of the active and completed assessment or development phase projects for the period of November 1, 1999 through October 31, 2002.

| Project Name | Project Period | 319 Allocation & Source * | 319 Costs (to date) | NPS Report Status | TMDL Status ** | Monitoring Objectives and Water Quality Variables *** |
|---|---|---|---|---|---|---|
| Phase I Cannonball River Watershed | 8/99 - 6/01 | $13,865 in Development Funds | $13,865 | Phase I & II data will be included in the same report. | Pending | Targeted three headwater subwatersheds. Data collection included FCB, TSS, N, and P concentrations, stream discharge, AGNPS modeling, and riparian assessment. Also see Cannonball Phase II |
| Maple River (Dickey & LaMoure Counties) | 7/99 - 10/00 | $153,706 in Development Funds | $153,706 | Data included in PIP | Pending | Assessed use conditions in Maple Creek. Data collected included FCB, TSS, N, and P loadings. Also completed riparian assessment and AGNPS modeling of the watershed. One livestock waste system demonstration was also installed. Assessment data was incorporated into the Maple River WRAS. |
| Cedar Creek Basin | 3/97 - 12/00 | $52,235 in Development Funds (Includes funds allocated & expended prior to 11/01/99.) | $52,235 | Completed 10/00 | Pending | Final phase of the Cedar Creek Basin assessment. Based on AGNPS modeling and subwatershed assessment reports, the subwatersheds were prioritized and PIP's developed. PIP's for the highest priority subwatersheds were approved by EPA in 1/01. |
| Pipestem Creek (Foster Co.) | 5/99 -6/01 | $3,829 in Development Funds | $3,829 | Completed 6/01 | N/A | Assessed beneficial use conditions of the creek and its tributaries (below Lake Hiawatha) that flow into Pipestem reservoir. Data collection includes FCB, TSS, N, and P concentration trends. Also conducted a riparian assessment, landuse inventory, and livestock winter feeding area inventory |

| Project Name | Project Period | 319 Allocation & Source * | 319 Costs (to date) | NPS Report Status | TMDL Status ** | Monitoring Objectives and Water Quality Variables *** |
|---|---|---|---|---|---|---|
| Powers Lake | 2/00 - 6/02 | $6334 in Development Funds | $6,334 | Data included in FY03 PIP | Pending | Assessing degree of beneficial use impairments in Powers Lake. In-stream and lake data to be collected includes FCB, TSS, N, chlorophyl a, P, loadings/discharge and landuse. Data summary was included in the FY 2003 PIP. |
| Kelly Creek Assessment | 2/99 - 6/00 | $36,391 in Development Funds | $36,391 | Data summary included in PIP | N/A | Assessed headwater tributary to Kelly Creek. Data collected included SWMM modeling and stream habitat assessment. Also conducted limited water chemistry analysis for model calibration. |
| Tyler Coulee Watershed Water Quality Improvement | 5/00 - 6/02 | $17,155 in Development Funds & $57,523 in Base Funds | $17,155 in Develop. Funds & $57,523 in Base Funds | Completed 7/02 | N/A | Assess the extent of NPS impacts to water quality in Tyler Coulee within Bismarck city limits by; developing XPSWMM model; identifying potential corrective measures; and establishing numeric reduction goals. Variables being evaluated include stream flow/stage, N, TSS, P, current landuse and projected urban development. |
| Phase I - James River Headwaters & Rocky Run Watershed Assessment | 4/00 - 6/04 | $72,000 in Base Funds (Also received $695,999 in FY02 funds to support Phase II implementation in Rocky Run Watershed) | $40,702 (The balance of funds, $31,298, are included in the Phase II budget) | Rocky Run Report Completed 7/01; As part of Phase II the James River Report is due 6/04 | Pending | Assess beneficial use conditions and sources and causes of NPS pollution impairing uses in James River Headwaters and Rocky Run Creek.. Monitoring activities include AGNPS modeling, water quality and biological sampling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, macroinvertebrates, and landuse |
| Devils Lake WRAS | 7/00 - 6/03 | $72,876 in WRAS Funds | $14,340 | The water quality report was completed 12/01; Project final report due 6/03 | N/A | Document/compare current water quality conditions in the subwatersheds of Devils Lake Basin and identify potential sources and causes of NPS pollutants impacting water quality. Variables being monitored include N, P, TSS, stream flow/stage, major anions/cations, and landuse practices. |
| Pembina River WRAS | 5/00 - 6/03 | $151,572 in WRAS Funds | $44,522 | Due 6/03 | N/A | Assess current beneficial use conditions and sources and causes of use impairments to establish subwatershed priorities. Also develop a basin management plan. Variables being monitored include N, P, TSS, flow/stage, and land use. |

| Project Name | Project Period | 319 Allocation & Source * | 319 Costs (to date) | NPS Report Status | TMDL Status ** | Monitoring Objectives and Water Quality Variables *** |
|---|---|---|---|---|---|---|
| Nine Township Assessment | 7/01 - 6/04 | $190,308 in Base Funds (These were reallocated funds from the Antelope Creek project) | $55,826 | Due 6/04 | N/A | Assess current beneficial use (aquatic life & recreation) conditions and sources and causes of NPS pollutants impairing uses in the subwatersheds of the Knife River . Monitoring activities include water quality and biological sampling, AGNPS modeling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, macroinvertebrates, and flow/stage and landuse. |
| Phase II Cannonball River Assessment | 4/01 - 6/04 | $38,132 in Base Funds | $4,723 | Due 6/04 Will include data from Phase I & II | Pending | Assess beneficial use conditions and sources and causes of NPS pollutants impairing uses within the Cannonball River subwatersheds. Monitoring activities include water quality and biological monitoring, AGNPS modeling, and riparian assessment, Variables being monitored include N, P, TSS, FCB, macroinvertebrates, flow/stage, and landuse. |
| Minot Stormwater Assessment | 1/01 - 6/01 | $3,600 in Development Funds | $3,600 | Completed 6//01 | N/A | Summarize existing water quality data for the Mouse River subwatersheds within Minot city limits. Identify monitoring activities for inclusion in the city's stormwater ordinances. |
| Bear & Bonehill Watersheds | 1/01 - 6/03 | $48,050 in Development Funds | $31,172 | Due 6/03 | N/A | Assess beneficial use conditions and sources and causes of NPS pollutants impairing uses within the watersheds. Monitoring activities include water quality and biological monitoring, AGNPS modeling, and riparian assessment. Variables being monitored include N, P, TSS, FCB, macroinvertebrates, flow/stage, and landuse. |
| Sheyenne River Assessment (Ransom Co.) | 1/02 - 6/04 | $71,760 in Development Funds | $0 (Only used local funds, to date) | Due 6/04 | N/A | Assess beneficial use conditions and sources and causes of NPS pollutants impairing uses within the watershed. Monitoring activities include water quality and biological monitoring, and AGNPS modeling. Variables being monitored include N, P, TSS, FCB, flow/stage, macroinvertebrates, and landuse. |

| Project Name | Project Period | 319 Allocation & Source * | 319 Costs (to date) | NPS Report Status | TMDL Status ** | Monitoring Objectives and Water Quality Variables *** |
|---|---|---|---|---|---|---|
| McDowell Watershed | 6/02 - 9/03 | $22,688 in Development Funds | $0 | Due 9/03 | Pending | Assess beneficial use conditions in the reservoir and identify sources and causes of NPS pollutants impairing those uses. Monitoring activities include in-lake and stream water quality monitoring, and AGNPS modeling. Variables being monitored include N, P, TSS, FCB, flow/stage, and landuse |
| Armourdale Watershed | 10/02 - 6/04 | $7,500 in Development Funds | $0 | Due 6/04 | Pending | Assess beneficial use conditions in the reservoir and identify sources and causes of NPS pollutants impairing those uses. Monitoring activities include in-lake and stream water quality monitoring, and AGNPS modeling. Variables being monitored include N, P, TSS, FCB, flow/stage, and landuse |
| Northgate Watershed | 10/02 - 6/04 | $7,500 in Development Funds | $0 | Due 6/04 | Pending | Assess beneficial use conditions in the reservoir and identify sources and causes of NPS pollutants impairing those uses. Monitoring activities include in-lake and stream water quality monitoring, and AGNPS modeling. Variables being monitored include N, P, TSS, FCB, flow/stage, and landuse |
| Carbury Watershed | 10/02 - 6/04 | $7,500 in Development Funds | $0 | Due 6/04 | Pending | Assess beneficial use conditions in the reservoir and identify sources and causes of NPS pollutants impairing those uses. Monitoring activities include in-lake and stream water quality monitoring, and AGNPS modeling. Variables being monitored include N, P, TSS, FCB, flow/stage, and landuse |

* Specific 319 allocations for assessment/development projects using Base Program or WRAS funds are also listed in Table 6 in Section IV. The 319 allocations for the projects supported with "Development Phase Funds" are part of the total amount of funding listed under the Development Phase Fund in Table 6.

** For the TMDL Status "Pending" means a TMDL is scheduled and "N/A" means a TMDL is not scheduled for development.

*** FCB - fecal coliform bacteria; TSS - total suspended solids; N - nitrogen constituents; P - total phosphorus

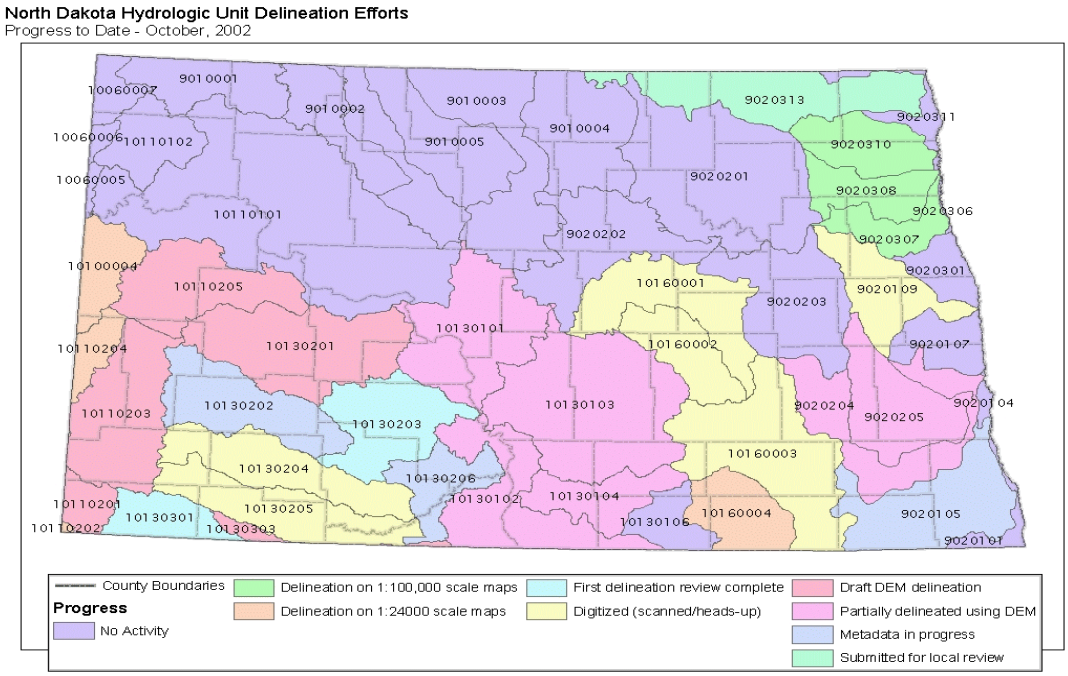
Currently, there are two sources of Section 319 support for assessment level projects. Generally, the short-term or small watershed assessment projects are supported with Section 319 funds available through the NPS Program's "Project Development Fund." Section 319 funds available through the Project Development Fund are unexpended funds reallocated from other NPS Program projects that were completed under budget. If the waterbody is also listed on the TMDL

List, alternative funding sources (e.g., 604(b); 104(b)(3)) may also be accessed to support the assessment activities. For the multi-year or basin-wide assessments, the local sponsors participate in the annual Section 319 grant application process to secure Section 319 support (Base or Incremental Funding) for their projects. Regardless of the source, the match to the Section 319 funding is provided by the local project sponsors. Cumulative Section 319 expenditures on local assessment/development phase projects since July 1999 are provided in Table 7 in Section IV.

As part of a nationwide effort to create a national, consistent and seamless watershed database, several state and federal agencies have partnered to delineate and digitize watershed and subwatershed boundaries in North Dakota. The North Dakota Department of Health, in cooperation with the NRCS, is the lead agency in the project. These two agencies, along with the North Dakota Geological Survey, North Dakota State Water Commission, U.S. Geological Survey, and the U.S. Forest Service - Dakota Prairie Grasslands signed a memorandum of understanding in the summer of 2000 and began this cooperative effort. Other state, federal and tribal organizations also involved in the delineation project include the: North Dakota Game and Fish Department, North Dakota Department of Transportation, North Dakota Water Users Association, U.S. Department of Agriculture - Agriculture Statistics Service, Bureau of Reclamation, Three Affiliated Tribes, Federal Highway Administration, U.S. Army Corps of Engineers, and National Weather Service. All of these groups or agencies have representatives on the Interagency Hydrologic Unit Work Group (IHUG), which oversees the delineation process.

Due to limitations and variability in funding contributions from participating agencies, progress on the watershed delineations has been delayed somewhat. Figure 1 shows the progress, to date. To ensure the project continues to move forward, additional efforts have been initiated to secure the necessary financial support. The State Water Commission has received a grant from EPA to delineate watersheds and subwatersheds in the James River sub-basin and in the Western Wild Rice River sub-basin. The US Forest Service-Dakota Prairie Grasslands has delineated watersheds and subwatershed on National Grassland property in the state, which includes the Little Missouri River and portions of the Lower Sheyenne River. In addition, the ND Department of Health signed a cooperative agreement with the US Geological Survey to assist in completing digitization of delineations for the Pembina River, Lower and Upper Cannonball, Upper Heart, and Cedar Creek.

**Figure 1.** Status of hydrologic unit delineations as of October 2002.




As the watershed delineation project proceeds and preliminary data sets are released for review by the local water resource boards, they will also be placed on the North Dakota GIS Data Hub at www.discovernd.com/gis. This data will be considered preliminary until all watershed delineations in North Dakota are completed and certified by NRCS Digital Cartographic and Geospatial Data Center in Fort Worth, Texas. The tentative completion date for the statewide delineations is October 2004.

## A. Assessment Objective & Task Accomplishments

**Objective 1**. Complete periodic assessments of the eight digit hydrologic units in the state.

**Task 1**: Review various assessment methods and existing water quality and natural resource inventory (NRI) data to develop a strategy for completing a unified assessment of the eight digit hydrologic units in the state. *[**Product:** Data sets and process for assessing the eight digit hydrologic units; **Milestone:** August 1998]*

Complete - In cooperation with NRCS, existing water quality and landuse data was reviewed and a unified watershed assessment process was established in 1998.

**Task 2:** Conduct an assessment of the state's eight digit hydrologic units every five years. *[**Product:** Unified Watershed Assessment Reports (Appendix 6); **Milestone:** October 1998, 2003, 2008, etc.]*

On Schedule - The first North Dakota Unified Watershed Assessment - FY 1999 was completed in September 1998. The assessment report can be found under "publications" on the NDDH home page (www.health.state.nd.us).

**Objective 2**. Develop and implement a strategy/process that will allow accurate assessment of the water quality and beneficial use conditions within the state's 12 digit hydrologic units.

**Task 3:** (Revised 10/01) Coordinate with the appropriate agencies and organizations to delineate and digitize the 12 digit hydrologic units in the state. *[**Product:** GIS coverage and maps of the state's 12 digit hydrologic units; **Milestone:** (Revised) October 2004]*

On Schedule - 12 digit HU's rather than 14 digit HU's will be delineated. Statewide coverages and maps are scheduled to be completed in 2004. Figure 1 on page 12 identifies the current status for the 12 digit HU delineations.

**Task 4:** (Revised 10/01) Inventory existing data/information and determine data needs (land use, water quality, biological, etc.) for accurately assessing local watersheds or the 12 digit hydrologic units in the major river basins. *[**Product:** Summaries of existing data to be used for identifying and prioritizing data collection needs within local subwatersheds and/or the six major river basins; **Milestone:** (Revised) Data inventories for the local watersheds is an ongoing effort; Summaries for the 12 digit HU's in the first two basins will be completed by March 2005 with subsequent summaries of the other four basins completed by March 2007, at a rate of two basins per year.]*

On Schedule - Preliminary data inventories have been conducted for all the current assessment projects. Information sources generally included 305(b) Reports, the 1999 UWA; USGS; NDDH and local feedback. During the interim, while the 12 digit HU delineation process is underway, watershed boundaries are being defined by NRCS HU delineations. Under the revised schedule, inventories of the major river basins will be able to start using the 12 digit HU delineations in 2005.

**Task 5:** (Revised 10/01) Coordinate and implement monitoring and assessment activities within local subwatersheds and/or priority 12 digit HU's lacking sufficient data/information to determine beneficial use impairments. *[**Product:** Local and/or state level Sampling and Analysis Plans (SAP) and/or strategies describing monitoring and assessment goals and objectives, sampling procedures, and responsible organizations. -- 3-5 SAP's or strategies developed and implemented/year; **Milestone:** (Revised) The local assessment activities have been ongoing since 1999 - The first SAP's or QAPP's for 12*

*digit HU's will be developed and implemented October 2005; During the interim, 2-5 QAPP's or SAP's will be developed, annually, for locally prioritized watersheds within Category I basins*]

On Schedule - Also see Task 3. All assessment project areas after 2004 will utilize the 12 digit HU to define project boundaries. During the interim, local assessment needs and projects will be based on NRCS HU boundaries, local feedback, UWA information, 303(d) priorities, etc.. Table 2 lists the active and completed assessment projects since November 1, 1999. All the assessment projects listed on Table 2 have approved SAP's or QAPP's.

**Task 6:** (Revised 10/01) Compile existing and new data to assess beneficial use support and watershed conditions within local watersheds and/or the 12 digit HU's in each major river basin. *[**Product:** NPS Assessment Reports and/or TMDL's (as appropriate) based on data collected within the local watersheds and/or 12 digit HU's in the major river basins; **Milestone:** (Revised) Development of NPS Assessment Reports or TMDL's for local watersheds has been ongoing since November 1999; The first NPS Assessment Reports and/or TMDL's for the 12 digit HU's will be completed in October 2006.]*

On Schedule - Table 2 indicates the report status for all the assessment projects initiated since November 1999.

**Objective 3:** (Revised 10/02) Establish watershed specific assessment goals for the highest priority Tier II subwatersheds (e.g. 12 digit HU's) within the six major river basins and develop quality assurance project plans (QAPPs) to assess beneficial use conditions and identify sources and causes of pollutants impairing any beneficial uses.

**Task 7:** (Revised 10/01) Provide assistance to local resource managers, Project Advisory Committees, and/or Basin Management Committees to prioritize local subwatersheds and/or12 digit HU's in the six major river basins and establish assessment strategies. *[**Product:** A priority watershed/waterbody list identifying the Tier I, II, or III waterbodies, including local plans or strategies for assessing the local subwatersheds and/or 12 digit HU's; **Milestone:** (Revised) Local subwatershed prioritization is an ongoing effort; Prioritization of the 12 digit HU's in the major river basins will be initiated October 2005]*

On Schedule - Current assessment strategies are focusing on local priorities and smaller watersheds based on USGS/NRCS HU boundaries. To date, assessment strategies have been established and implemented in the Devils Lake Basin, Pembina River Basin, Cannonball River Watershed, and James River Headwaters watershed. Data being collected within these basins will be used to establish tier rankings for the subwatersheds and set priorities for the implementation of the necessary NPS pollution management measures.

Several Soil Conservation Districts (SCD) have also established assessment strategies for subwatersheds within their district boundaries. These SCD's include Bowman/Slope SCD in the Little Missouri Watershed; Mercer SCD in the Knife River Watershed; LaMoure/James River SCD's in the James River Watershed; and Ransom SCD in the Sheyenne River Watershed.

The schedule for the development of assessment strategies for the 12 digit HU's in the state's major river basins has been delayed until the12 digit HU delineations are completed. Under the revised schedule, these efforts will be initiated in 2005 (See previous Tasks).

**Task 8:** Based on local priorities, assist local sponsors with the development of watershed specific sampling and analysis plans (SAPs) or QAPPs and the collection and interpretation of monitoring data to; 1) establish watershed specific goals based on identified use impairments associated with NPS pollution and; 2) determine management needs for addressing specific sources and causes of NPS pollution. *[**Product:** An average of ten watershed specific assessment reports (e.g. TMDLs, watershed PIPs) annually from 1999 through 2013; **Milestone:** Ongoing effort; will be initiated in October 1999]*

Behind Schedule - SAPs or QAPPs have been developed for all NPS assessment projects supported with Section 319 funds. Table 2 provides an update on the report status for each assessment project in the state. Previous staffing limitations, have limited the number SAP's and/or assessment reports developed on an annual basis to 4-5 per year. However, the NDDH has hired three additional staff this reporting period to assist with the development of QAPP's, NPS assessment reports, and/or TMDL's. With the addition of these new staff members, this task should be back on schedule during the next reporting period.

**Objective 4**: Assess/evaluate the success of local project efforts (e.g. BMP implementation) to improve water quality and restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

**Task 9:** Assist local sponsors with the development and implementation of SAPs/QAPPs that are based on specific pollutant reduction goals (e.g. TMDL endpoint) and/or beneficial use improvements for waterbodies addressed under approved project implementation plans (PIPs). *[**Product:** SAPs for inclusion in watershed PIPs; 2-5 watershed PIPs/year; **Milestone:** Ongoing effort; SAP's for all "new" watershed projects will be completed by September of each year. -- 1999 through 2013.]*

On Schedule - Sampling and analysis plans (SAPs) or Quality Assurance Project Plans (QAPPs) have been developed and implemented for all the watershed

projects approved by the Task Force and EPA. Since July 1999, SAPs or QAPPs have been developed for 18 assessment projects and 19 implementation phase watershed projects.

**Task 10:** Compile data collected within the watersheds and evaluate progress toward the project's beneficial use restoration and/or pollutant reduction goals. *[**Product:** Reports for each watershed project area describing the success of the local sponsor's efforts to achieve the project goals (e.g. reduce identified NPS pollution causes and/or restore impaired beneficial uses); 2-5 end-of-project reports per year; **Milestone:** Ongoing effort; Data will be reviewed and summarized annually; End-of-project reports will be completed by July of each year.]*

On Schedule - All water quality data collected within the assessment or watershed projects has been entered in the STORET database. Baseline data collected prior to the initiation of the approved watershed projects has been summarized in watershed specific NPS assessment reports and/or incorporated into the PIP's. Final Reports for completed projects identified in this and previous reports are entered in EPA's Grants Reporting and Tracking System (GRTS), as they are approved.

## III. Prioritization

**Prioritization Goal:** Based on the most current inventory and assessment data, prioritize the state's waterbodies/watersheds for future NPS pollution assessment or abatement efforts.

Completion of the FY 99 Unified Watershed Assessment (UWA) has provided an effective tool for prioritizing waterbodies throughout the state. With the UWA, the NDDH, in cooperation with the NRCS, has established general priority ratings (e.g, Category I, Category II) for the 8 digit HU's in the state. Information in the UWA has also been used by local resource managers to establish basin-specific resource management priorities, which has resulted in the initiation of 12 Watershed Restoration Action Strategies (WRAS) in several Category I basins. Specific watersheds where a WRAS has been implemented since November 1999 are as follows:

- Griggs County Water Quality Improvement Project (Sheyenne River watershed in Griggs County); HUC - 09020203
- Cottonwood Creek Watershed (James River Subwatershed); HUC - 10160003-070
- Beaver Creek Watershed; HUC - 10130104
- Wild Rice Watershed (Headwater subwatersheds in Sargent County); HUC - 09020105
- Pembina River Basin Assessment; HUC - 09020313
- Devils Lake Basin Assessment; HUC - 09020201
- Cedar Creek Basin (Crooked Creek, Chanta Peta, & Mid Cedar watersheds are the subwatershed priorities in the basin); HUC - 10130205
- Maple River Watershed (Elm River Subwatershed); HUC -10160004

- Sheyenne River Watershed (in Barnes County); HUC - 09020205
- Upper Sheyenne River Watershed (in Wells County); HUC - 09020202
- Lower Pipestem Creek Watershed (below Lake Hiawatha); HUC - 10160002
- Rocky Run Watershed (James River Subwatershed); HUC - 10160001

The NPS Program currently utilizes a "process" rather than a "physical list" (with the exception of the TMDL List) to identify priority waterbodies in the state. During the initial planning stages, a two step process is used to establish subwatershed priorities within a local geographic area or specific watershed. The first step involves a review of current information (i.e., obtained through local feedback; the 1999 UWA; 305(b) Reports; NDDH; USGS; NRCS; etc.) to establish a preliminary Tier ranking for each subwatershed in the project area. These rankings are used to determine the type of management or assessment activities needed in each subwatershed. The second phase focuses on the development of a priority schedule for the implementation of the appropriate subwatershed assessment or management activities.

In general, the waterbodies given a Tier II or III ranking need additional assessment data to more accurately identify any beneficial use impairments and/or determine the sources and causes of pollutants impairing beneficial uses. For these waterbodies, the local sponsorships first set a priority schedule for assessing the waterbodies and than develop and implement quality assurance project plans (according to the priority schedule) to collect the necessary data. This data is than used to determine management needs in the watershed and elevate the waterbody to a higher Tier ranking (e.g., Tier II to Tier I).

The Tier I waterbodies are those watersheds with sufficient data to identify any beneficial use impairments as well as the sources and causes of those impairments. Local sponsors will typically recognize the Tier I waterbodies as their highest priority. In such cases, the local sponsors will seek the appropriate financial assistance (i.e., Section 319 funding, EQIP funding, etc.) to implement a comprehensive watershed management plan.

Upon completion of the 12 digit HU delineations, NPS Program staff currently plan to evaluate NPS pollution management and assessment needs in the major river basins by assigning preliminary Tier I, II, or III rankings to each of the 12 digit HU. This process was originally scheduled to start in October 2001. However, due to delays in the delineation process, the schedule for determining the 12 digit HU Tier rankings has been revised and will be initiated in 2004. Completion these statewide preliminary Tier rankings should complement and expedite the local prioritization efforts by creating a consistent "starting point" for the second phase of all the local prioritization processes within the major river basins.

**A. Prioritization Objectives & Task Accomplishments**

**Objective 1:** Categorize all of the state's waterbodies/watersheds into one of the three Priority Tiers.

**Task 1:** (Revised 10/01) Delineate the waterbodies/subwatersheds within each of the six major river basins at the 12 digit HU level or lower. *[**Product:** GIS coverage and maps identifying waterbodies and subwatersheds within each river basin; **Milestone:** (Revised) October 2004]*

On Schedule - The revised completion date for all the major river basins is October 2004. See Objective 2 Tasks under the Assessment Section.

**Task 2:** (Revised 10/01) Review the most current data/information (e.g. watershed assessment reports, 303(d) list, landuse inventories) for local watersheds targeted for prioritization and/or the 12 digit HUs' in each river basin and assign Tier rankings. *[**Product:** Inventory of existing data/information with GIS coverage and maps identifying Tier rankings for the local watersheds and/12 digit HU's in the six major river basins; **Milestone:** (Revised) Data inventories for the local subwatersheds have been ongoing since November 1999; The summaries for the first two major river basins will be completed by March 2005. Subsequent inventories and rankings of the other four basins will be completed by March 2007, at a rate of two basins per year. ]*

On Schedule - The schedule for the major river basin inventories has been revised to align with the completion date for the 12 digit HU delineations (See Objective 2 Tasks under the Assessment Section). — Local priorities or Tier rankings have been or are being established in several watersheds and soil conservation districts (SCD). SCD's or watersheds previously or currently involved in prioritization activities are as follows: 1) Mercer SCD - Subwatersheds of the Knife River; 2) LaMoure & James River SCD - subwatersheds to the James River; 3) Bowman/Slope SCD - Subwatersheds to the Little Missouri River; 4) Cannonball River Watershed; 5) Pembina River Watershed; 6) Devils Lake Basin; 7) Cedar Creek Watershed; and 8) Ransom SCD - Sheyenne River Subwatershed in Ransom County. The subwatersheds within these project areas have been or are being assessed to elevate the waterbodies from a Tier II or III ranking to a Tier I ranking. Following these assessment activities, the sponsors will also further prioritize the Tier I waterbodies for the development and implementation of comprehensive watershed management plans (e.g., Section 319 PIP's).

**Objective 2:** (Revised 10/01) Establish basin priority rankings for each of the Tier I, II, and III subwatersheds within local priority watersheds and/or the six major river basins in the state.

**Task 3:** (Revised 10/01) In cooperation with Basin Management Committees, local resource managers, etc., identify local watershed and/or basin-specific criteria for prioritizing the waterbodies/watersheds within each Tier. *[**Product:** (Revised) Prioritization processes for Tier I, II, and III waterbodies and watersheds in each local watershed and/or major river basin; **Milestone:** (Revised) Development of prioritization criteria for local watersheds has been ongoing since November 1999; Development of*

*criteria for the major river basins will be initiated in October 2004 and completed in 2007]*

On Schedule - Development of prioritization criteria for the major river basin subwatersheds is scheduled to be initiated upon completion of the 12 digit HU delineations. — Currently, Tier rankings for local watersheds are being established by NDDH and local sponsorships, as needed. Typically, water quality and beneficial use data is insufficient and the targeted waterbodies are given a Tier II or III rating. For these waterbodies, the local sponsors have generally established a subwatershed assessment schedule based on observed water quality conditions, landuse practices and local concerns. Following the assessments the waterbodies are than elevated to a Tier I ranking.

**Task 4:** (Revised 10/01) Obtain input on local priorities regarding beneficial uses, water quality and NPS pollution management needs within the local watersheds and/or the six major river basins. *[**Product:** (Revised) Two to four public meetings/project; local priority rankings of the local watersheds and/or 12 digit HU's within the major river basins (e.g. maps and/or information identifying local priorities); **Milestone:** (Revised) Prioritization of local subwatersheds has been ongoing since November 1999; Initial prioritization meetings within each basin will be conducted from October 2004 through October 2005. Based on the outcome of these meetings, each basin will set its own schedule for subsequent meetings to complete this task. It is recognized that this task will be an ongoing effort to accommodate periodic updates to the management plan and waterbody prioritization list.]*

On Schedule - NPS Program personnel have participated in committee meetings for all NPS assessment projects listed in Table 2. In most cases, the local sponsors have based their priorities on observed water quality conditions in the subwatersheds, degree/type of public use, and current landuse practices.

**Task 5:** (Revised 10/01) Based on local input and available data, assign priority ratings (e.g. high, low, medium) for the Tier I, II, or III subwatersheds within in the local priority watershed and/or the 12 digit HU's in each major river basin. *[**Product:** (Revised) Local or basin-wide waterbody priority list and maps identifying priority ratings (i.e., Tier I, II, and III); **Milestone:** (Revised) Development of local priority ratings has been ongoing since November 1999. Prioritization of the 12 digit HU's within the major river basins will be initiated in October 2005 and conclude in October 2008, at a rate of two basins per year.]*

On Schedule - Following the assessment activities, the local sponsors of the completed projects listed in Table 2 have revised the priority rankings of the assessed watersheds. Typically, the assessed watersheds are elevated to a Tier I ranking which enables the sponsors to pursue funding to address the sources and

causes of NPS pollution. If there are multiple subwatersheds involved in the assessment, the sponsors have also established a priority schedule for the implementation of watershed project implementation plans. Prioritization of the subwatersheds within the Tier I category has generally focused on the type and degree of beneficial use impairment, anticipated producer participation, and level of local support.

## IV. Assistance

**Assistance Goal:** Provide sufficient financial and technical assistance to local resource managers (e.g. SCDs, WRBs) to ensure accurate identification of beneficial use and water quality impairments resulting from NPS pollution and effective development and completion of projects that will restore and/or maintain the beneficial uses of waterbodies impacted by NPS pollution.

The best measure for evaluating the delivery of NPS Program financial and technical assistance is the number of projects initiated and/or maintained on an annual basis. Delivery of this assistance starts with the development of the project implementation plans and continues throughout the implementation period of the projects. General types of assistance provided to local projects on an annual basis include: project oversight; sample analysis; PIP review and comment; sample collection and project management training; quality assurance project plan development; distribution of educational materials; biological monitoring support; and Section 319 financial support. NDDH personnel involved in the delivery of NPS Program financial and technical assistance are as follows:

- Water Quality Division Director & Surface Water Program Manager - Program Supervision (0.70 FTE)
- NPS Program Coordinator - Program Administration (1 FTE)
- Environmental Scientist - Monitoring/Assessment Assistance (2 FTE)
- Watershed Planning & Information/Education Coordinator - I/E Assistance (1 FTE)
- Microbiology and Chemistry Lab Personnel - Sample Analysis (3 FTE)
- Ground Water Program Personnel - Aquifer Assessment Project (2.5 FTE)
- Secretarial Assistance (0.5 FTE)

Specific roles of NDDH staff involved in the delivery of the NPS Program are provided in the July 2002 - August 2004 NPS Program Staffing and Support Workplan. Approximately, 10% of the NPS Program budget is utilized to support NDDH staff involved in the NPS Program. Total expenditures for NPS Program staffing and support during the period of July 1, 1999 through October 31, 2002 are provided in Table 3.

**Table 3.** Estimated NPS Program Staffing & Support Expenditures - 7/1/99 thru 10/31/02

| Cost Category | Section 319 Funds | State Match | Total Expenditures |
|---|---|---|---|
| Personnel Salaries | $624,884 | $416,589 | $1,041,473 |
| Fringe Benefits | 188,012 | 125,342 | 313,354 |
| Travel | 59,351 | 39,568 | 98,919 |
| Equipment | 21,786 | 14,524 | 36,310 |
| Supplies | 39,972 | 26,648 | 66,620 |
| Other (phone, postage, rent, misc.) | 67,226 | 44,817 | 112,043 |
| Indirect | 60,592 | 40,394 | 100,986 |
| **TOTAL** | **$1,061,823** | **$707,882** | **$1,769,705** |

Through assistance delivered by NPS Program staff, 49 locally sponsored projects have received Section 319 financial support under the FY99 Section 319 Grant Award *(Note: Does not include Development Phase projects or projects completed prior to 7/1/99.)*. Nine of the local projects have been completed and 40 are still active as of October 30, 2002. Projects completed since July 1, 1999 and their final report status are listed in Table 4.

**Table 4.** Completed Projects Funded Under the FY 99 Grant Award - July 1, 1999 - October 31, 2002. *****

| Project | FY Funding | End Date | Final Report Status |
|---|---|---|---|
| Pipestem Creek Watershed | 95 | 6/00 | The final report was received and approved in 12/01. |
| Wells County Manure Management Demo. | 96 | 6/00 | The final report was received and approved in 12/01. |
| Phase III Hay Creek Watershed Water Quality Improvement (Assessment) | 99 | 6/01 | The water quality report for Phase III was completed in 1/01. The Phase III final report will be combined with the Phase IV and V final reports. The tentative due date for this consolidated final report is 06/04. |
| Antelope Creek Watershed | 98 | 6/01 | The project was discontinued in 6/01 due to limited producer participation. A final report on accomplishments has been received and entered in GRTS. Unexpended Section 319 funds were reallocated to the Nine Township Assessment project in 7/01. |
| Phase II Renwick Watershed | 98 | 6/01 | The final report was received in 7/01 and entered in the GRTS. |
| Barnes Co. Livestock Waste Management & Streambank Restoration Demo. | 99 | 6/01 | The final report was received in 8/01 and entered in the GRTS. |

| Project | FY Funding | End Date | Final Report Status |
|---|---|---|---|
| Mouse River Park Streambank Restoration | 00 | 6/01 | The final report was revised in 11/01and entered in the GRTS. |
| GIS Demonstration for Groundwater Protection (Nitrates) | 99 | 6/02 | The final report was received in 8/02 and entered in the GRTS. |
| Tyler Coulee Watershed Water Quality Improvement | 00 & Develop. Funds | 6/02 | The final report was received in 7/02 |

***** Table 4 does not include the projects completed before July 1, 1999 or the projects funded with Development Phase Funds. The status of projects supported with Development Phase Funds is provided in Table 2. The status for project completed prior to 7/99 can be obtained in the GRTS or previous annual reports.

Table 5 provides general information on the active projects funded through the FY99 Grant Award. Specific Section 319 allocations and non-federal match commitments for all the active and completed projects supported under the FY99 Grant are provided in Table 6. Total Section 319 funding allocated to the locally sponsored projects equates to approximately 90% of the federal funds obligated under the FY99 Grant Award. Annual updates and progress reports for all local projects are provided in the GRTS.

**Table 5.** Active State and Local Projects Under the FY99 Grant Award - July 1, 1999 thru October 31, 2002

| PROJECT | PROJECT TYPE | WATERBODY TYPE | NPS CATEGORY | FISCAL YEAR(S) FUNDING |
|---|---|---|---|---|
| NPS Base Staffing/Support | Staffing, Project Development, & I/E Program | All Types | Crosscuts Categories | 90, 91, 93, 95, 96, 97, 99, 00 & 02 |
| Water Education for Teachers (WET) | Education | All Types | Crosscuts Categories | 92, 95, 98, 99, 01 & DF * |
| Foster Co. Regional End. Education Series (TREES) | Education | All Types | Crosscuts Categories | 92, 94, 96, 01 & DF * |
| Ground Water Monitoring (Staffing/Support) | Assessment | Ground water | Agriculture/ Urban | 92 , 94 & 00 |
| Upper Sheyenne Watershed | Watershed | Lake/River | Agriculture | 96 & 02 |
| Griggs Co. Watershed (FY99 WRAS) | WRAS | River/Stream | Agriculture | 96 & 99 |
| NPS BMP Engineering Team | Watershed | All Types | Agriculture | 97 & 02 |
| Beaver Creek Watershed (FY99 WRAS) | WRAS | Lake/Stream | Agriculture | 97 & 99 |
| Livestock Waste Technical Assistance & Information Program | Education | All Types | Agriculture | 97 & 02 |

| PROJECT | PROJECT TYPE | WATERBODY TYPE | NPS CATEGORY | FISCAL YEAR(S) FUNDING |
|---|---|---|---|---|
| Cottonwood Creek Watershed (FY99 WRAS) | WRAS | Lake/Stream | Agriculture | 97, 99 & 02 |
| Statewide ECO ED Camps | Education | All Types | Crosscuts Categories | 97 & 01 |
| Southwest N. D. Information & Education Program | Education | All Types | Agriculture | 97, 00 & DF* |
| Mirror Lake Watershed | Watershed | Lake/Stream | Agriculture | 98, 01, & DF * |
| Phase II - Red River Riparian Project | Watershed | Rivers/Streams | Agriculture & Urban | 98 |
| Nine Township Assessment (Mercer Co.) | Assessment | River/Stream | Agriculture | 98 - (Antelope Crk. Watershed reallocation funds) |
| ND Dept. of Agriculture Waterbank Program | Watershed | Wetlands | Agriculture | 99 & 02 |
| Cedar Lake Watershed | Watershed | Lake/Stream | Agriculture | 99 |
| NDSU Deep Soil Nitrate Assessment | Education | Groundwater | Agriculture | 99 |
| Wild Rice Watershed (FY99 WRAS) | WRAS | Streams & Wetlands | Agriculture | 99 & 01 |
| UND Aquifer Denitrification Assessment | Education | Groundwater | Crosscuts Categories | 99 & DF * |
| Pembina River Assessment (FY99 WRAS) | WRAS | River/Stream | Crosscuts Categories | 99 |
| ND Diary Pollution Prevention Program | Watershed | All Types | Agriculture | 00 |
| Satellite Image Applications to Water Quality Protection | Education | All Types | Agriculture | 00 |
| Kelly Creek Water Quality Improvement Project | Demonstration | Stream & Wetland | Urban | 00 |
| Upper James River/Rocky Run Watershed Assessment | Assessment | River/Stream | Agriculture | 00 |
| Maple River Watershed | WRAS | Stream | Agriculture | 00 |
| Devils Lake Basin Assessment | WRAS | Lake/Stream | Agriculture | 00 |
| Crooked Creek Watershed (Part of Cedar Creek WRAS) | WRAS | Stream | Agriculture | 00 |
| Mid Cedar Watershed (Part of Cedar Creek WRAS) | WRAS | Stream | Agriculture | 00 |
| Chanta Peta Watershed (Part of Cedar Creek WRAS) | WRAS | Stream | Agriculture | 00 |

| PROJECT | PROJECT TYPE | WATERBODY TYPE | NPS CATEGORY | FISCAL YEAR(S) FUNDING |
|---|---|---|---|---|
| Phase IV Hay Creek Watershed | Watershed | Stream | Urban | 01 |
| Sheyenne River WRAS (Barnes Co.) | WRAS | River | Agriculture | 01 |
| ND Envirothon | Education | All Types | Crosscuts Categories | 01 |
| Groundwater Sensitivity Mapping | Education | All Types | Crosscuts Categories | 01 & 02 |
| Digital Taxonomic Keys for Aquatic Insects | Education | All Types | Crosscuts Categories | 01 |
| Buffalo Springs/Lightening Creek Watersheds | Watershed | Stream | Agriculture | 01 |
| Phase II Cannonball River Assessment | Assessment | River/Stream, Lakes | Agriculture | 01 |
| ND Stockmen's Association Manure Management Specialist | Education | All Types | Agriculture | 01 |
| Livestock Facility Assistance Program | Watershed | All Types | Agriculture | 01 |
| Phase V Hay Creek Watershed | Watershed | Stream | Urban | 02 |
| Lower Pipestem Creek Watershed | WRAS | Stream | Agriculture | 02 |
| Rocky Run Watershed (Implementation Phase) | Watershed | Stream | Agriculture | 02 |

* DF - Development Phase Funds were also allocated to the project.

**Table 6.** Section 319 Funding and Local Non-Federal Match Commitments for Projects Supported Under the FY99 Grant Award - July 1, 1999 thru October 31, 2002.

| PROJECT NAME | SECTION 319(h) ALLOCATION | LOCAL AND/OR STATE MATCH | TOTAL |
|---|---|---|---|
| Statewide ECO ED Camp | 692,378 | 461,585 | 1,153,963 |
| SW NPS/Water Quality I/E Project | 887,042 | 591,361 | 1,478,403 |
| Foster Co. TREES | 396,056 | 264,037 | 660,093 |
| Griggs Co. Water Quality Project (FY99 WRAS) | 1,213,536 | 809,024 | 2,022,560 |
| Cottonwood Creek Watershed (FY99/02 WRAS) | 1,429,894 | 953,263 | 2,383,157 |
| Beaver Creek Watershed (FY99 WRAS) | 773,165 | 515,444 | 1,288,609 |
| NDSU Livestock Waste Management Program | 980,269 | 653,513 | 1,633,782 |
| NPS BMP Team | 876,801 | 584,534 | 1,461,335 |

| PROJECT NAME | SECTION 319(h) ALLOCATION | LOCAL AND/OR STATE MATCH | TOTAL |
|---|---|---|---|
| Project WET | 300,022 | 200,015 | 500,037 |
| Pipestem Creek Watershed | 44,937 | 29,958 | 74,895 |
| Upper Sheyenne Watershed (FY02 WRAS) | 816,833 | 544,555 | 1,361,388 |
| Development Phase Fund | 532,748 | 355,165 | 887,913 |
| Professional Fees | 7,166 | 4,777 | 11,943 |
| Antelope Creek Watershed | 48,256 | 32,171 | 80,427 |
| Nine Township Assessment (Mercer Co.) | 114,186 | 76,124 | 190,310 |
| Renwick Watershed - Phase II | 75,763 | 50,509 | 126,272 |
| Mirror Lake Watershed | 485,937 | 323,958 | 809,895 |
| Red River Riparian Project - Phase II | 1,427,121 | 951,414 | 2,378,535 |
| NDDA Waterbank Program | 744,509 | 496,339 | 1,240,848 |
| Hay Creek Watershed - Phase III | 60,738 | 40,492 | 101,230 |
| Hay Creek Watershed - Phase IV | 264,000 | 176,000 | 440,000 |
| Cedar Lake Watershed | 613,037 | 408,691 | 1,021,728 |
| Barnes Co. Livestock Waste Mgt. and Streambank Restoration Demonstration | 84,667 | 56,445 | 141,112 |
| NDSU GIS Nitrate Assessment System Demonstration | 27,696 | 18,464 | 46,160 |
| UND Aquifer Denitrification Assessment | 102,498 | 68,332 | 170,830 |
| Wild Rice River (FY99/01 WRAS) | 1,320,428 | 880,285 | 2,200,713 |
| NDSU Deep Soil Nitrate Assessment | 66,666 | 44,444 | 111,110 |
| Pembina River Basin (FY99 WRAS) | 151,572 | 101,048 | 252,620 |
| Tyler Coulee Watershed Water Quality Improvement | 74,678 | 49,785 | 124,463 |
| N. D. Dairy Pollution Prevention Program | 695,000 | 463,334 | 1,158,334 |
| Satellite Image Applications to Water Quality Protection | 293,460 | 195,640 | 489,100 |
| Mouse River Park Streambank Restoration Demonstration | 60,000 | 40,000 | 100,000 |
| Kelly Creek Water Quality Improvement Project | 191,135 | 127,424 | 318,559 |

| PROJECT NAME | SECTION 319(h) ALLOCATION | LOCAL AND/OR STATE MATCH | TOTAL |
|---|---|---|---|
| Rocky Run/Upper James River Assessment | 72,000 | 48,000 | 120,000 |
| Devils Lake Basin (FY00 WRAS) | 72,876 | 48,584 | 121,460 |
| Crooked Creek Watershed (Cedar Creek Basin FY 00 WRAS) | 174,229 | 116,153 | 290,382 |
| Chanta Peta Watershed (Cedar Creek Basin FY 00 WRAS) | 281,157 | 187,438 | 468,595 |
| Middle Cedar Watershed (Cedar Creek Basin FY 00 WRAS) | 445,874 | 297,249 | 743,123 |
| Groundwater Program Monitoring Well Installation * | 0 | 0 | 0 |
| Maple River Watershed (FY00 WRAS) | 1,414,064 | 942,709 | 2,356,773 |
| Livestock Facility Assistance Program | 287,927 | 191,951 | 479,878 |
| ND Stockmen's Association - Manure Management Specialist | 228,483 | 152,322 | 380,805 |
| ND Groundwater Sensitivity Mapping | 786,000 | 524,000 | 1,310,000 |
| ND Envirothon | 93,945 | 62,630 | 156,575 |
| Digital Taxonomic Keys for Aquatic Insects in ND | 100,333 | 66,889 | 167,222 |
| Buffalo/Lightening Springs Watershed | 411,240 | 274,160 | 685,400 |
| Cannonball River Watershed Assessment | 38,132 | 25,421 | 63,553 |
| Barnes Co. Sheyenne River Watershed (FY01 WRAS) | 1,757,700 | 1,171,800 | 2,929,500 |
| Hay Creek Watershed - Phase V | 512,505 | 341,670 | 854,125 |
| Lower Pipestem Watershed (FY02 WRAS) | 877,470 | 584,980 | 1,462,450 |
| Rocky Run Watershed (FY02 WRAS) | 695,999 | 463,999 | 1,159,998 |
| **TOTAL** | **24,102,128** | **16,068,084** | **40,170,212** |

* $40,500 in Section 319 funding was originally allocated for monitoring well installation under the NDDH Groundwater Program's Aquifer Vulnerability Assessment (See current NPS Program Workplan). Due to reduced needs for well installation, the $40,500 was transferred to the Development Phase Fund to allow for reallocation to other NPS pollution assessment projects. The funding transfer was completed in October 2002.

During the FY 2002 reporting period, Program staff have assisted local sponsors with the development of PIP's for 11 new or continuation projects seeking FY 2003 Section 319 funding. Seven of the project proposals were approved and four were not approved by the NPS Task Force in October 2002. Of the seven approved projects, five were continuation projects and 2 were new project proposals. The final PIP's for the seven approved projects are currently being updated to address recommendations from the Task Force. Upon completion, the final PIP's will be submitted to EPA for FY 2003 Section 319 funding consideration. These PIP's are scheduled to be submitted to EPA in December 2002.

Since July 1, 1999, approximately 90% of NPS Program expenditures have been associated with the implementation of locally sponsored projects. Table 7 provides a summary of the expenditures and distribution of costs between the different project categories. The local watershed projects, as in past years, have accounted for a majority of the annual Section 319 expenditures in the state. Primary costs within these watershed project areas have generally been associated with the installation of various best management practices (BMP), particularly livestock manure management systems. For example, while the costs for manure management facilities are minimized to the extent possible, several systems installed the past year have cost in excess of $100,000. In the future, expenditures on engineering design services for manure management systems are also expected to increase as the demand for such services exceeds the assistance currently provided by the NRCS and Section 319 BMP Engineering Teams. Despite the potentially high costs, improved manure management has been and will continue to be a priority issue in many of the watershed project areas. Consequently, a greater percentage of future Section 319 funds will undoubtedly be dedicated to statewide initiatives or watershed projects focused on livestock manure management.

**Table 7.** Estimated Expenditures for Staffing & Support and each Project Category - July 1, 1999 thru October 31, 2002.

| Project Category | 319 Expenditures | State/Local Match | Total | Percent of Total |
|---|---|---|---|---|
| NPS Program Staffing & Support | $1,061,823 | $707,882 | $1,769,705 | 10.4% |
| Development Phase Assessments | 265,035 | 176,690 | 441,725 | 2.6% |
| Multi-Year Assessments | 465,425 | 310,283 | 775,708 | 4.6% |
| Information & Education | 2,096,345 | 1,397,563 | 3,493,908 | 20.5% |
| Watershed | 6,330,545 | 4,220,363 | 10,550,908 | 61.9% |
| **TOTAL** | **$10,219,173** | **$6,812,781** | **$17,031,954** | **100%** |

Local match responsibilities continue to be one of the main limiting factors when developing and implementing NPS projects in the state. To address this concern, NPS Program staff have worked with the local project sponsors to expand their partnerships and sources of non-federal

financial support. Organizations currently providing financial and/or technical assistance to the local projects include entities such as Duck Unlimited, Natural Resources Trust, Water Resource Boards, Soil Conservation Districts, City Councils, Resource Conservation & Development Councils, ND Game & Fish Department, and the State Water Commission. Specific financial or technical assistance contributions from these groups are provided in the annual project reports in the GRTS.

The State Water Commission Trust Fund (SWC Funds) was a "new" source of non-federal financial assistance that was made available to local Section 319 projects this past year. Through the 2001 legislative session, $200,000 were appropriated under the State Water Commission's budget to support local Section 319 projects. Due to the limited amount of funding, project specific requests were limited to 10% of total project costs, not to exceed $50,000. In addition, only the FY 2002 Section 319 projects approved by the NPS Task Force were eligible to apply for the SWC Funds. During this reporting period, seven locally sponsored projects were approved for SWC Trust Funding. Specific projects approved and the associated SWC Fund allocation for the 2002/2003 biennium are as follows:

| | |
|---|---|
| Livestock Facility Assistance Program | $ 47,900 |
| Mirror Lake Watershed | 32,405 |
| Lower Sheyenne Education/Assessment Watershed Project | 19,436 |
| Lower Pipestem Creek Watershed | 12,000 |
| NPS BMP Team | 50,000 |
| James River Headwaters - Rocky Run Watershed | 22,259 |
| Phase III Upper Sheyenne Watershed | 16,000 |
| Total SWC Trust Funds Allocated | $ 200,000 |

The Save Our Lakes (SOL) Program, administered by the ND Game & Fish Department, is another potential source of non-federal match that has become available over the past year. The primary focus of the SOL Program is the improvement and/or maintenance of water quality and aquatic life uses within several priority fisheries across the state. Approximately $800,000 in state funds have been made available this biennium to support local activities such as watershed assessments, BMP implementation; and in-lake restoration. In some cases, SOL funds have been allocated to locally sponsored Section 319 projects assessing NPS pollution impacts or addressing NPS pollution impairments within a priority watershed. Specific SOL funding allocations to Section 319 projects are provided in the applicable FY02 annual reports in the GRTS.

NPS Program staff have also continued development of a SRF loan program to support the installation of manure management systems. The guidelines and policies for the SRF loan program have been completed and the "intended use" plan has been updated to include livestock manure management systems. The remaining step in the process is to coordinate with the Bank of North Dakota and the Municipal Bond Bank to finalize an application process and delivery

system for the SRF loans. However, staffing limitations have delayed completion of the final phase this past year. Consequently, development of the SRF loan program is now tentatively scheduled to be completed in 2003.

**A. Assistance Objective & Task Accomplishments**

**Objective 1:** Increase the ability of potential sponsors to determine their local NPS pollution management needs and develop strategies or plans that will effectively address those NPS pollution concerns.

**Task 1:** Develop and distribute reference materials describing NPS pollution project development and management to soil conservation districts, water resource boards, and other potential local sponsors. *[**Product:** 150 NPS Project Proposal and Reference Guides; **Milestone:** October 1998 with updates to the Guide completed annually.]*

Complete - Project Proposal and Reference Guides have been distributed to all the SCD and WRB in the state. This document has been updated as needed.

**Task 2:** (Revised 10/01) Organize and conduct local workshops and/or training sessions focusing on NPS pollution management, water quality/NPS pollution assessment, and project development. The primary target audience will be local resource managers and staff (e.g. SCDs, WRBs) and NRCS field office staff. *[**Product:** 2-3 workshops or training sessions, annually; **Milestone:** (Revised) Ongoing effort initiated in August 1999.]*

On Schedule - Major workshops or training events conducted the past year include the "Annual ND Watershed Coordinators Conference" and the "Annual ND/SD Watershed Coordinators Meeting." One-on-one training has also been provided to new NPS project staff and sponsors, as needed. When possible, local Section 319 project staff have also attended various resource management/planning courses provided by NRCS.

**Objective 2:** Provide financial and technical assistance to Basin Management Committees and local project advisory committees to develop and implement assessment projects (or TMDLs) which will elevate priority subwatersheds in each basin to a Tier I ranking.

**Task 3:** Based on local or basin priorities, provide technical assistance to local resource managers (e.g. SCDs, WRBs) and/or Basin Management Committees with the development of assessment strategies and/or sampling and analysis plans (SAPs) for the highest priority Tier II and III waterbodies/watersheds in each basin. Watershed assessment strategies and/or SAPs will describe monitoring and assessment goals, objectives, and tasks, sampling procedures, responsible parties, costs, milestones, and quality assurance/quality control requirements. *[**Product:** 4-6 planning meetings per year; 10 assessment strategies/SAPs per year; **Milestone:** This will be an ongoing effort.*

*The targeted completion date for the strategies/SAPs for each sampling season is February. -- February 1999, 2000, etc.]*

On Schedule - NPS Program staff have assisted local sponsors with the development of SAPs/QAPPs for 14 of the projects listed in Table 2 in the Assessment Section. The monitoring plan for the Minot Stormwater Assessment project was developed by a private consultant.

**Task 4:** Complete contractual/financial agreements with local sponsors and implement monitoring and assessment efforts as scheduled in the SAPs. *[**Product:** An average of 10 development/assessment phase projects (e.g. TMDLs) per year; **Milestone:** This will be an ongoing effort. The development/assessment phase projects will be 1 -2 years in length and be initiated in March/April each year. -- March 1999, 2000, etc.]*

On Schedule - Contractual and financial agreements have been developed with the sponsors for the assessment projects listed in Table 2.

**Task 5:** Deliver technical assistance to local sponsors to summarize monitoring and assessment data and develop the reports identifying beneficial use impairments, sources and causes of NPS pollution, and watershed specific pollutant reduction targets (e.g., TMDL targets). *[**Product:** An average of 10 watershed assessment reports per year; **Milestone:** This is an ongoing effort. The first reports will be completed by December 1999.]*

On Schedule - All data collected within the assessment project areas has been entered in STORET. Compilation and interpretation of the data is completed at the end of each project and provided to the local sponsors to aid in future management decisions. Table 2 lists the status of the reports for assessment projects supported under the FY99 Section 319 Grant.

**Objective 3:** Provide financial and technical assistance to local sponsors for the development and implementation of watershed projects addressing the highest priority Tier I waterbodies in each river basin.

**Task 6:** Based on watershed specific NPS assessment reports, assist local sponsors with the development of Tier I watershed project implementation plans (PIPs). *[**Product:** 5-10 planning meetings per year; 3-7 watershed PIPs per year. The projected number of PIP's developed per year is based on historic Section 319 funding appropriations of $100 million nationally and does not reflect the FY 1999 funding level of $200 million. If Section 319 funding continues at the FY 1999 level of $200 million or in the event additional financial support is received through state, federal, or local sources, the number of PIP's developed annually will likely increase. Through annual Task Force evaluations, this task as well as the others will be reviewed and adjusted accordingly to reflect any changes to the NPS Management Program's goals, objectives, and tasks*

*resulting from increased financial and/or technical support;* ***Milestone:*** *This is an ongoing effort. Draft PIPs will be completed by July and final PIPs by October of each year. -- July/October 1999, 2000, etc.]*

On Schedule - Watershed projects funded, to date, under the FY99 Section 319 Grant are listed in Tables 5 & 6. NPS Program staff have assisted with the development of PIP's for all the watershed projects listed in the tables.

**Task 7:** Submit watershed PIPs to the NPS Task Force and Region VIII EPA for review and Section 319 funding approval. *[**Product:** Section 319 funding for a minimum of 3-7 PIPs per year;* ***Milestone:*** *The NPS Task Force and EPA will conduct their reviews, annually, during the period of October - January.]*

On Schedule - PIPs have been developed for two new watershed projects and one continuation watershed projects this reporting period. These PIP's were reviewed and approved by the NPS Task Force in October 2002 and are scheduled to be submitted to EPA in December 2002 for funding approval.

**Task 8:** Develop contractual agreements with local sponsors and provide guidance and technical assistance to implement and manage the watershed projects. *[**Product:** A minimum of 3-7 new watershed project contracts per year; 5-10 Project Advisory Committee meetings per year; 3-7 training sessions per year on the management of Section 319 and local match funds; information on potential sources of financial assistance; weekly/monthly communication with sponsors or staff;* ***Milestone:*** *Ongoing effort; Technical assistance for project management is provided, as needed, throughout the project period.]*

On Schedule - Annual contracts have been developed and maintained with all projects listed in Table 6. When necessary, meetings with local watershed project sponsors are conducted to address any management questions and concerns.

**Objective 4:** Expand sources of financial assistance for NPS pollution projects to reduce local sponsors' match responsibilities and/or the level of Section 319 assistance needed.

**Task 9:** Coordinate NPS Program efforts with local project sponsors, to determine current and future state/local match requirements for local NPS pollution management projects. *[**Product:** Report summarizing the cumulative match commitments needed to support current and future NPS projects;* ***Milestone:*** *October 1999.]*

Complete - A summary of local match needs has been developed. This summary was based on a continued Section 319 allocation of approximately $5 million. Using this allocation rate, annual local match needs will range between $2.1 and $2.9 million.

**Task 10:** Support a state general fund appropriation dedicated to providing cost-share assistance for local Section 319 projects. *[**Product:** Biennial appropriations of state general funds to be used to match locally sponsored Section 319 projects; **Milestone:** The state operates on a biennium which begins on July 1st of odd numbered years. Depending on legislative approval, state general funds could be available in July 2001.]*

On Schedule - Through the efforts of several SCDs and their legislators, $200,000 in non-federal funds were appropriated under the State Water Commission's budget to help support the match requirements of local Section 319 project sponsors. These funds were allocated to seven Section 319 watershed projects during the 2002/2003 biennium. Several SCD's and legislators have also initiated efforts to introduce legislation during the next session in 2003 to establish a more long-term non-federal funding source for Section 319 projects.

**Task 11:** (Revised 10/02) Establish a CWA SRF loan program to partially support locally sponsored NPS pollution management projects. *[**Product:** SRF low interest loan program to support a portion of local NPS project match requirements; **Milestone:** (Revised) December 2003.]*

Behind Schedule - The SRF loan program policies for funding the installation of manure management facilities has been completed. Livestock manure management facilities have also been included in the SRF Program's intended use plan. The final step that remains to be completed is the development of a process for reviewing and approving loan requests. This process will be developed in cooperation with the Bank of North Dakota and the Municipal Bond Bank. Due to time constraints, completion of this final step has continued to be delayed. The revised completion date for the loan program has been set for December 2003.

**Task 12:** Develop and distribute a directory of potential local, state, federal, and private sources of financial assistance to project sponsors wanting to address water quality and/or NPS pollution. *[**Product:** Financial Assistance Directory and/or information on government programs and private foundations or industries that offer financial assistance to local resource management projects; **Milestone:** July 1999.]*

Complete - Utilize documents developed by EPA and other agencies.

**Task 13:** Strengthen and expand partnerships with various commodity groups (e.g. ND Stockman's Association, ND Wheat Growers), agricultural companies (e.g. Monsanto, Concord) and other private groups or organizations (e.g. Ducks Unlimited, Certified Crop Advisors) to increase the level of financial and technical assistance available to local NPS pollution projects. *[**Product:** 2-5 meetings annually; direct mailings; "new" Task Force members and local project partners; **Milestone:** Ongoing effort; Will be initiated in October 1999.]*

On Schedule - Partnership building is an ongoing effort accomplished at the state and local levels through direct participation in meetings, mailings, personal contacts, etc.. The quarterly NPS Task Force newsletter is also used to keep potential partners informed on NPS Program activities in the state. The Stockmen's Association, Ducks Unlimited, and ND Game & Fish Department are three specific groups that have most recently became actively involved in NPS projects in the state. The Stockmen's Association has received $50,000 in state general funds and $228,483 in FY 01 Section 319 funds to support efforts to increase livestock producers' understanding of AFO/CAFO rules and manure impacts to water quality. The Save Our Lakes (SOL) Program, administered by the ND Game & Fish Department, is another state program that can provide non-federal funds to support local NPS pollution assessment or watershed projects. Approximately $800,000 were available through the SOL Program during the 2002/2003 biennium. Ducks Unlimited, which has been providing financial and technical assistance to support BMP planning and implementation efforts in the Wild Rice watershed, has also recently expanded the delivery of this assistance into the Lower Sheyenne River watershed project area in Ransom County.

**Task 14:** Assist Local Project Advisory Committees and/or Basin Management Committees with the solicitation of financial assistance from other local/state/federal programs and private foundations or companies to support local NPS pollution management efforts. *[**Product:** Increased support and participation from a variety of state/federal/local resource management groups, private foundations, local businesses, etc.; **Milestone:** Ongoing effort; Completed annually as part of the PIP development and implementation activities.]*

On Schedule - During PIP development, the local sponsors are provided information (i.e., contacts, etc.) on other state/federal partners that may be able provide support for their project. Throughout the project period, the local sponsors are also forwarded information, as it becomes available.

**Objective 5:** Maintain post-project NPS pollution management efforts and document long-term benefits of NPS pollution control and/or water quality improvement practices applied within the project areas.

**Task 15:** (Discontinued 10/01) Provide financial and technical assistance to monitor/evaluate post-project water quality trends and maintenance of restored beneficial uses for three years following the completion of a project. *[**Product:** Post-project data and reports summarizing trends and/or conditions within the project areas during the three year "post-project evaluation period" -- 1 - 2 reports/year; **Milestone:** Discontinued]*

Discontinued - NPS Program staffing limitations have prevented consistent implementation of post-project monitoring efforts. To date, the Goodman Creek watershed is the only completed project where some level of post-project monitoring has been conducted. Data collected within Goodman Creek watershed has been entered in STORET and is currently being interpreted. Because of the time demands associated with the active and new projects, post-project monitoring will be discontinued as a priority task. However, if circumstances allow for post-project monitoring, NPS Program staff will provide assistance, as needed. Long-term biological monitoring efforts conducted by the NDDH, Surface Water Program may also offer opportunities in the future to revisit the bio-monitoring sites within completed project areas to evaluate trends in the aquatic community (fish & macroinvertebrates).

**Task 16:** (Revised 10/01) Provide technical assistance to local project sponsors to maintain post-project I/E efforts. *[**Product:** Assistance for development and implementation of various I/E projects; **Milestone:** Ongoing effort; Initiated in October 1998.]*

On Schedule - Post-project assistance for various I/E activities has been primarily accomplished through ongoing educational activities (e.g., newsletter, tours, etc.) conducted by the local sponsors and/or NDDH. Due to the growing financial needs of the active and new NPS projects, support for the post-project I/E efforts is limited to technical assistance from the NPS Program. Therefore, "financial assistance" has been omitted from the task statement.

## V. Coordination

**Coordination Goal:** Increase the effectiveness of NPS pollution management in the state by coordinating project development and implementation efforts with local, state, and federal agencies and private organizations involved with natural resource management in the state.

In nearly all cases, successful delivery of financial and technical assistance to local sponsors has involved a coordinated effort between various local/state/federal entities. As in past years, the primary local sponsors continue to be Soil Conservation Districts (SCD) and Water Resource Boards (WRB). The NRCS has also continued to be the main federal partner in most project areas. To strengthen local partnerships, NPS Program staff have continually worked with all project sponsors to include other local resource managers or community organizations in the project planning and implementation process. Through active solicitation for additional partners, most local sponsorships have been able to establish more diverse Project Advisory Committees (PAC) to assist them in project development and management. Although the composition of the PAC's vary between project areas, groups or organizations typically represented on the advisory committees include; NRCS, City Councils, County Commissions, Extension Service, RC&D Councils, SCDs, and WRBs.

The size of the project area is one of the main limiting factors associated with long-term or consistent participation in the local PAC's. Committees formed in hydrologic units greater than 300,000 acres seem to be more difficult to establish and the meetings are typically attended by only a small core group of members. Diversity in resource priorities and financial resources appears to be the "root" of the difficulties interfering with the formation of management committees for the larger geographic areas. Given these experiences, the NPS Program has been and will continue to focus on the formation of "more localized" project advisory committees rather than basin-wide management committees. Over the long term, as the local PAC's are formed and delineation of the 12 digit hydrologic units are completed, NPS Program staff will work with the PAC's within a common river basin to establish basin management committees composed of representatives from each local advisory committee.

NPS Task Force meetings continue be an effective process for stimulating coordination between state/local NPS projects and similar programs sponsored by other agencies and organizations. Membership on the Task Force includes representatives from nearly all, if not all, state/federal natural resource agencies, several commodity/producer groups, tribal councils, and private wildlife/natural resource groups. Through periodic meetings (2-3/year), the Task Force members are involved in the development of nearly all NPS projects initiated in the state, which provides an opportunity to gain a better understanding of partnership opportunities for projects sponsored by their agency or organization. The Task Force members also help strengthen and expand coordination efforts across the state by: 1) providing input on the delivery of the NPS Program; 2) participating in draft project reviews; and 3) reviewing/approving NPS projects forwarded to EPA.

**A. Coordination Objective & Task Accomplishments**

**Objective 1:** Expand local participation in the prioritization, development, and implementation of NPS pollution management projects

**Task 1:** Develop and distribute information to assist local resource managers with the formation of partnerships. *[**Product:** State Directory identifying agencies and organizations that can provide assistance for NPS project development and implementation - 200 copies; **Milestone:** August 1999.]*

Complete - Information available through EPA and other agencies regarding various assistance programs has negated the need to develop a state directory. Current information available on assistance programs and potential partners has be distributed regularly. As additional information becomes available it will also be forwarded to the appropriate local entities.

**Task 2:** (Revised 10/01) Coordinate the formation of "Basin Management Committees" to facilitate the prioritization, development, and implementation of NPS pollution management projects in the state's six major river basins. *[**Product:** A minimum of six*

*Basin Management Committees; Participate in 6-12 meetings per year;* ***Milestone:*** *(Revised) November 2004 through October 2007.]*

On Schedule - Formation of the basin management committees has been postponed until the delineation of the 12 digit hydrologic units is completed. This will allow for additional time to establish more local PAC's in the river basins. The PAC's will serve as the foundation for the development of the basin management committees.

**Task 3:** Assist with the development of Local Project Advisory Committees and participate in their meetings. *[**Product:** 3-7 "new" Local Project Advisory Committees established per year; Participate in 2-3 Advisory Committee meetings per project per year;* ***Milestone:*** *This will be an ongoing effort; The "new" Advisory Committees will be established during the development of the project plans.]*

On Schedule - All the projects listed in Table 6, particularly the watershed projects, have established project advisory committees. Generally the groups or agencies represented on the watershed project advisory committees include SCD's, WRB's, NRCS, NDDH, Extension Service, County Commissions, and City Councils.

**Objective 2:**. Maintain partnerships and communication with the appropriate local, state, and federal agencies, and private organizations to coordinate resources and ensure other natural resource management efforts are consistent with the state's NPS pollution management goals.

**Task 4:** (Revised 10/01) Obtain input from the Task Force during the development of projects and update its members, regularly, on NPS Management Program and local NPS project activities. *[**Product:** (Revised) 2-3 Task Force meetings per year;* ***Milestone:*** *Annual Schedule --- Draft PIP review in July; Final PIP review in October; Local project updates/presentations in February.]*

On Schedule - The Task Force reviewed 12 draft FY 2003 Section 319 project proposals on August 14, 2002. All Task Force comments and recommendations on the draft proposals were provided to the local project sponsors to assist with the development of final PIPs. In October 2002, the Task Force reviewed 11 final PIP's requesting FY03 Section 319 funding. Seven PIP's were approved for FY03 Section 319 funding and four of the PIP's were not approved by the Task Force.

**Task 5:** Participate in interagency meetings addressing the delivery of other state and federal natural resource management programs that may affect NPS pollution management or beneficial uses of the state's water resources. *[**Product:** Annual meetings --- 5-6 NRCS State Technical Committee meetings; 2 NDASCD Water Resources*

*Standing Committee meetings; 4 NRCS Interagency, Watershed Committee meetings; 6 Red River Basin Board meetings; and 4 Pembina River Watershed Advisory Board meetings;* ***Milestone:*** *This will be an ongoing effort.]*

On Schedule - On an annual basis, NPS Program and NDDH staff participate in numerous interagency meetings conducted by other resource management agencies (e.g., NRCS, NDASCD, WRB, etc.).

**Task 6:** Utilize the Task Force to disseminate information to other state and federal agencies to keep them updated on NPS pollution management goals and objectives and priorities within the state. *[**Product:** Materials to be distributed to Task Force members -- - Updated NPS Pollution Management Plan and Waterbody Priority List; Unified Watershed Assessment Report; Updated Section 303(d) Waterbody List; and Section 305(b) Reports;* ***Milestone:*** *This will be an ongoing effort. Distribution of the materials will be initiated in January 1999.]*

On Schedule - Materials and documents such as the NPS Management Plan, UWA, NPS Program policies, 305(b) Reports, etc. have been provided to the Task Force as they are developed or updated.. The Task Force, in cooperation with the NDDH, also distributes a quarterly newsletter to approximately 1300 individuals.

**Task 7:** (Revised 10/01) In cooperation with federal land managers (e.g. USFWS, USFS, BLM) in the state, establish a process for conducting consistency reviews of federal projects and programs on public lands within the watersheds of impaired and/or threatened waterbodies. *[**Product:** Consistency review process which includes at a minimum; review criteria, designated contacts, identification of impaired or threatened waterbodies and guidelines for addressing inconsistencies;* ***Milestone:*** *(Revised) Completion date for the process is October 2003.]*

Behind Schedule - Agency workloads and pending policy changes have delayed the initiation of this task. The revised completion date has tentatively been set for October 2003.

## VI. Information and Education

**Information and Education Goal:** Increase North Dakota residents' understanding of the water quality and beneficial use impairments associated with NPS pollution and strengthen public support for the voluntary implementation of NPS pollution control activities.

Public education has always been an important component of the state's NPS Pollution Management Program. Given the voluntary nature of the NPS Program, a variety of educational efforts are being supported across the state to increase public understanding of NPS pollution concerns and strengthen support for current and future NPS pollution control projects. In most

cases, these information/education (I/E) efforts are sponsored and implemented by local entities such as soil conservation districts, water resource boards, and NDSU Extension Service. Although the specific goals of each project may vary considerably, cumulatively the state/locally sponsored I/E projects form a balanced statewide educational program that addresses a variety NPS pollution issues and targets all the state's residents.

Under the FY99 Consolidated Grant approximately 20% of the expenditures, to date, have been associated with the implementation of I/E projects. Through this support, multiple educational events have been conducted ranging from K-12 educational lyceums to manure management workshops for livestock producers. Specific information on the individual I/E projects and any materials developed by the projects is provided in the GRTS. To date, 12 I/E projects have been supported with Section 319 funds awarded under the FY 99 Consolidated Grant. Table 8 identifies the target audiences and goals of these I/E projects.

**Table 8.** Target audiences and goals of the information & education projects funded under the FY 99 Consolidated Section 319 Grant - July 1, 1999 - October 31, 2002.

| Project Name | Project Period | Final Report Status | Primary Target Audience | Project Goal |
|---|---|---|---|---|
| Water Education for Teacher (WET) | 10/93 - 6/05 | Due 6/05 | K-12 Youth & Teachers | Facilitate and deliver a statewide educational program that will increases participants understanding and awareness of NPS pollution and water quality issues in the state. |
| The Regional Environmental Education Series (TREES) | 11/92 - 6/06 | Due 6/06 | K-6 Youth | Statewide deliver of lyceum style programs that are designed to educate students on various environmental issues, with particular emphasis on water quality and NPS pollution. |
| Livestock Waste Technical Assistance & Information Program | 3/97 - 6/07 | Due 6/07 | Livestock Producers | Conduct workshops, develop educational materials, and provide one-on-one assistance to inform the state's producers of effective manure management practices and facilities. |
| Statewide ECO ED Camps | 3/97 - 6/05 | Due 6/05 | Sixth grade students | Organize and conduct one or two day camps, across the state, that provide hands-on instruction on a variety of natural resource management issues, with an emphasis on water quality and NPS pollution. |

| Project Name | Project Period | Final Report Status | Primary Target Audience | Project Goal |
|---|---|---|---|---|
| Southwestern ND I/E Program | 3/97 - 6/06 | Due 6/06 | Ag producers | Increase producer awareness and understanding of potential NPS pollution impairments to water quality and demonstrate solutions to those impairments within the 18 counties in SW ND. Improved manure management is the primary focus. |
| Barnes Co. Livestock Waste & Streambank Management Demo. | 3/99 - 6/01 | Complete 9/01 | Ag producers | Establish demonstration sites and conduct tours within Barnes County to educate area producers on alternative manure management and streambank restoration practices. |
| NDSU Deep Soil Nitrate Assessment | 4/99 - 6/04 | Due 6/04 | Ag producers | Establish and monitor field demonstration sites to document the benefits of variable rate fertilizer application for reducing the movement of nitrogen through the soil profile. Information will be disseminated statewide through tours, workshops, articles, etc.. |
| NDSU GIS Nitrate Assessment System | 4/99 - 6/02 | Complete 8/02 | Resource managers & Ag producers | Develop and provide training across the state on the use of a WEB based assessment system for identifying potential nitrate risks to groundwater in ND. |
| Mouse River Park Streambank Restoration Demo. | 4/00 - 6/01 | Complete 11/01 | General public | Establish a streambank restoration demonstration site to show Renville County residents various bioengineering techniques that can be used to address degraded streambanks. |
| Kelly Creek Water Quality Improvement Demo. | 4/00 - 6/03 | Due 6/03 | General public | Establish an interpretive site and disseminate information to increase area residents understanding of the functions and the NPS pollutant reduction capabilities of wetland complexes within an urban area. |
| ND Envirothon | 4/01 - 6/06 | Due 6/06 | $9^{th}$ - $12^{th}$ grade students | Develop and implement a statewide Envirothon competition focusing on soils, forestry, wildlife, aquatics, and a special topic that changes annually. |

| Project Name | Project Period | Final Report Status | Primary Target Audience | Project Goal |
|---|---|---|---|---|
| Digital Taxonomic Keys for Aquatic Insects in ND | 4/01 - 6/04 | Due 6/04 | General public | Utilize a computer-based format to produce digital keys, taxa lists and range maps for aquatic insects in ND. These keys will be available statewide on the Web and CD-ROM to provide easily accessible keys for resource managers, teachers, and students involved in biological monitoring and/or studies. |

In addition to the locally sponsored I/E projects, NPS Program staff have also participated in numerous public events to disseminate information on NPS pollution management. More specifically, this participation has included presentations at local tours and workshops, display booths at county fairs and agricultural shows; instruction at ECO ED camps, newsletter articles; and dissemination of materials. Several of the local "assistance-based" projects also have a significant I/E component or provide tools for education, that ultimately contribute to the success of the state's public education efforts. Although these projects were not designed to focus solely on public out-reach, they do expend a significant amount of time and resources to develop materials that can be used for educational purposes or educate their target audiences on specific NPS pollution issues. Projects serving this I/E supporting role include such projects as the; 1) Stockmen's Association Manure Management Specialist; 2) Dairy Pollution Prevention Program; 3) Aquifer Denitrification Assessment; 4) Groundwater Sensitivity Mapping; and 5) NDSU Satellite Imagery Applications to Water Quality Protection. More detailed information and annual updates on the state or locally sponsored I/E projects is provided in the GRTS.

**A. Information and Education Objective and Task Accomplishments**

**Objective 1:** Assess the general public's knowledge of NPS pollution issues.

**Task 1:** Conduct fact finding surveys or public forums. *[**Product:** public surveys conducted every 5 years; **Milestone:** The first survey was completed in 1994; Subsequent surveys will be completed in 2001; 2006; etc.]*

On Schedule - A follow-up survey was conducted this past year at the NPS Program information booth during the ND Winter Show and other agricultural shows in the state. Data collected through the survey is currently being compiled and interpreted. The results of the survey are tentatively scheduled to be completed by July 2003.

**Objective 2:** Deliver a balanced statewide I/E Program that addresses NPS pollution issues in the state and is targeted toward all age groups.

**Task 2:** Evaluate the various NPS pollution/water quality I/E materials developed by state, local, federal, and private organizations and obtain the most applicable materials for distribution in the state. *[**Product:** Library and directory for I/E materials; **Milestone**: Ongoing effort]*

On Schedule - The library is updated as new materials are received.

**Task 3:** Conduct periodic reviews of current state and locally sponsored I/E projects to identify effectiveness of the activities and determine if a balanced program is being delivered. *[**Product:** Summaries of ongoing I/E projects and activities and list of additional educational needs; **Milestone:** Ongoing effort conducted on an annual basis.]*

On Schedule: Program staff have participated in technical reviews of materials and schedules for Project WET, Statewide ECO ED, Project TREES, and ND Envirothon, as well as various I/E activities sponsored by local watershed projects.

**Task 4:** Meet with the appropriate public/private organizations (e.g., Soil Conservation Districts, Extension Service, etc.) to become familiar with their NPS pollution/water quality efforts and identify opportunities to coordinate similar efforts. *[**Product:** Information and contact directory for other agencies or organizations I/E activities; **Milestone:** Ongoing effort.]*

On Schedule - Through frequent interaction with the active I/E projects, program staff have disseminated information on opportunities to coordinate with similar I/E efforts in the state. When available, links to local I/E project websites are also included on the NPS Program home page.

**Objective 3:** Based on public input and reviews of existing I/E efforts, expand or develop new NPS pollution/water quality I/E activities and materials to ensure the appropriate and sufficient information is available to the residents of the state.

**Task 5:** Develop new educational materials , as needed, to inform the general public on the NPS Program and common NPS pollution management concerns in the state. *[**Product:** NPS Web site; Program brochure, information display, fact sheets, etc.; **Milestone:** Ongoing effort]*

On Schedule: The ND NPS Program website was launched in the spring of 2002. The address for the site is www.health.state.nd.us/NDHD/environ/wq/NPS. Program staff have also displayed the NPS Program information booth at several county fairs and agricultural events (e.g., ND Winter Show, Ag Expos, County Fairs, etc..) Materials distributed at the booth include the Program brochure, NPS pollution fact sheets, etc.

**Task 6:** Distribute information during various public events, provide public presentations and organize/conduct workshops for the general public and targeted audiences. *[**Product:** Attendance at the ND Winter Show; West River, KFYR, & KMOT Ag Expo's; County Fairs; school presentations; annual coordinator training workshops; etc.. **Milestone:** Ongoing effort.]*

On Schedule - Information was distributed at several local events by program staff and project sponsors. The NPS Program's information booth appeared at the ND Winter Show, KFYR Ag Expo, West River Ag Expo and several local/county events (e.g., county fairs, etc.).

**Task 7:** Distribute the quarterly Quality Water newsletter and utilize all other media types to promote NPS pollution control and improved landuse management to improve or protect the quality of the state water resources. *[**Product:** 4 Quality Water Newsletters annually; news articles/releases; promotional advertisements, etc.; **Milestone:** Ongoing effort]*

On Schedule - Three "Quality Water" newsletters were developed and distributed, this past year, to approximately 1200 individuals and/or local resource management groups.

**Task 8:** Coordinate with local/private natural resource groups and schools to design and implement citizen participation projects. *[**Product:** Citizen monitoring programs; Envirothon programs, etc.; **Milestone:** Ongoing effort]*

On Schedule - NPS Program staff have been directly involved in the development and delivery of several local water festivals as well as the TREES Program, Project WET and ND Envirothon Program. Program staff have also been working with NDSU Extension Service to establish a citizens monitoring program in the Red River Valley. If sufficient interest is generated, the citizens monitoring program will seek Section 319 financial support in 2003.

**Objective 4:** Deliver a consistent and balanced I/E Program across the state by coordinating with with various federal, state, local, and private organizations and/or agencies to develop and implement I/E projects focused on priority NPS pollution management issues in the state.

**Task 9:** Provide financial and technical assistance to local and state sponsored I/E projects focusing on NPS pollution. *[**Product:** Balanced statewide educational program that includes multiple statewide and local projects targeting the general public, agriculture producers, students, teachers, resource managers, etc.; **Milestone:** Ongoing effort.]*

On Schedule - Table 8 list all the I/E projects funded under the FY 99 Consolidated Grant. NPS Program staff have provided technical assistance, as needed, to all the I/E projects to ensure a balanced program is being delivered. Projects targeting the general public or producers are generally designed to disseminate information on impacts of and/or solutions to NPS pollution. The projects targeting students and/or teachers are designed to increase awareness and create a foundation for future I/E efforts. The primary youth education programs being used to inform and educate students are as follows:

| Program | Primary Grade Level | Primary Audience |
|---|---|---|
| Project WET | K - 12 | Teachers – Materials and Training |
| Project TREES | K - 6 | Students and Teachers |
| Statewide Eco Ed | 6 - 8 | Students, Teachers and Chaperones |
| ND Envirothon | 9 - 12 | Students and Advisors |

**Task 10:** Attend and participate in EPA Region VIII I/E Coordinator meetings and other federal or state sponsored conferences to stay abreast of NPS I/E activities in the nation and obtain information for incorporation in to the ND I/E Program. *[**Product:** Information and materials from other states, contacts in other states, knowledge of ongoing I/E efforts across the nation, etc.; **Milestone:** Ongoing effort.]*

On Schedule - EPA Regional or national I/E meetings and/or conferences have been attended when possible.

**Task 11:** Assist local I/E project sponsors with the delivery of their programs and facilitate communication and coordination between the projects. *[**Product:** Participation in local I/E activities (e.g., ECO Ed Camps, WET Institute, etc.); local project contact directory, information exchange between projects, etc.; **Milestone:** Ongoing effort.]*

On Schedule - Program staff have been directly involved in the ECO ED Camps, ND Envirothon Competitions, and Project WET educational offerings and advisory committee meetings. Technical assistance and support has also been provided, as needed, to several other projects supported with Section 319 funds.

**Task 12:** Update and maintain the Grants Reporting and Tracking System (GRTS). *[**Product:** Semiannual and annual updates of all projects funded with 319 funds; **Milestone:** Semiannual updates - April/May and Annual updates - December/January.]*

On Schedule - All required GRTS updates for 2002 are scheduled to be completed by January 1, 2003.

**Objective 5:** Evaluate public awareness of NPS pollution issues in the state to determine the effectiveness of the I/E Program and identify additional activities needed to strengthen the program.

**Task 13:** Develop feedback mechanisms that will allow the collection of broad based input from ND residents. *[**Product:** Surveys, questionnaires, polls, etc.; **Milestone:** Survey and questionnaires have been developed and are updated as needed]*

On Schedule - An electronic survey form was developed and used at the NPS Program information booth this past year.

**Task 14:** Solicit input from ND residents to gauge their understanding of NPS issues in the state and identify the most effective means for disseminating information to the general public. *[**Product:** Public surveys, exit surveys for workshops, direct feedback, etc.; **Milestone:** Public surveys/questionnaires are conducted annually at the NPS Program display booth during the ND Winter Show; direct feedback is an ongoing effort.]*

On Schedule - Direct feedback is an ongoing effort. A public survey was conducted at the NPS Program information booth during several agricultural shows (e.g., ND Winter Show, etc.) Data collected is currently being compiled and interpreted.

## VII. Program Evaluation

**Evaluation Goal:** Evaluate the successes and failures of the NPS Management Program and identify the necessary updates to the NPS Pollution Management Program to maintain successful delivery of financial and technical assistance to local and state agencies and private organizations addressing NPS pollution.

Program evaluation is being accomplished at two different levels. One component of the NPS Program evaluation process focuses on progression toward the goals listed in the NPS Management Program Plan goals. The other part of the process tracks local project benefits and/or accomplishments. Through periodic evaluations and local feedback, the delivery and implementation of the NPS Program can be assessed and the appropriate adjustments can be initiated to ensure priority NPS pollution concerns are addressed as effectively and efficiently as possible.

Current and future assessment reports, such as the UWA, 305(b) Report, and annual Groundwater Monitoring reports, are the primary means used to document the long-term trends in water quality, beneficial use conditions, and NPS pollution management in the state. The most recent editions of the UWA, Groundwater Monitoring reports, and 305(b) Report are provided on the NDDH web site, www.health.state.nd.us. These documents will be used to evaluate water

quality trends from a statewide perspective and identify specific areas where local coordination is needed to initiate future NPS pollution abatement or assessment projects. As the reports are updated, NPS pollution data and information in the reports will be compared to similar data presented in the 1998 305(b) Report and 1999 UWA to evaluate trends on a statewide basis. The 1998 305(b) Report and 1999 UWA are considered the reference or baseline documents for evaluating accomplishments associated with the implementation of the updated NPS Pollution Management Plan. The first in-depth review of NPS Program progress on a statewide basis will coincide with the next updates of the 305(b) Report and UWA, which are tentatively scheduled to occur in 2003 and 2005, respectively.

The NPS Pollution Task Force will also be involved in periodic reviews of the accomplishments under the updated NPS Management Plan. These Task Force reviews will provide the opportunity to gain input from other agencies and organizations regarding NPS Program progress as well as their recommendations on revisions to the Management Plan. The Task Force review process will focus on the status of specific program tasks, task products, and overall progression toward established goals and objectives. Since the implementation of the updated Management Plan is in the early stages, the first Task Force review is scheduled for January/February 2005. Subsequent reviews are planned to be conducted on a 5 year cycle (i.e., 2010, 2015, etc.).

Local input and recommendations are also an important part of the NPS Program review process. Through the semiannual and annual project reports, local sponsors are provided an opportunity to voice their concerns or recommendations on Program delivery. This feedback is reviewed annually to determine if there are any shortcomings in the delivery of assistance to local projects. Input and recommendations received from the local sponsors are provided in the project-specific annual reports in the GRTS.

Within the local project areas, particularly the watershed projects, various data is collected annually to document trends in water quality and/or beneficial use conditions as well as to evaluate the benefits of project efforts and applied BMP. All data collected within in the NPS project areas is entered in the STORET database. Upon completion of the projects, all applicable monitoring data is interpreted and a summary of the results is incorporated into the final reports of the associated projects. The final reports and associated monitoring results for all completed projects are entered in the GRTS, as they become available.

NPS Program staff also conduct interim reviews of each watershed project's monitoring data to evaluate annual trends in the water quality variables targeted for reduction. When applicable, biological data is also reviewed mid-way through the project period and fully interpreted at the end of the project. When appropriate, these interim data summaries are included in the annual reports and/or updated PIP's to reflect progress toward the original goals of the local watershed projects.

Specific evaluation methods vary considerably between the local projects and are largely dependent on the type of project and planned corrective measures. In most cases, the assessment

and watershed projects utilize various water quality and biological monitoring methodologies to gauge progress toward established goals. The monitoring objectives and final report status for the watershed projects funded under the FY99 Section 319 Grant are summarized in Table 9. Objective summaries and report status for the assessment/development phase projects are listed in Table 2 in Section II. Evaluation of other projects, such as information/education projects, generally focuses on the planned outputs, degree of local participation, number of events completed, and documented progress per task. Regardless of project type, all available monitoring data and other pertinent information is incorporated into the project-specific annual reports to document progress toward the goals and objectives listed in the PIP's. These reports are the primary means used by the NPS Program to track and evaluate individual project progress over the short and long term. The FY 2002 annual reports for all the projects supported with Section 319 funding are provided in the GRTS.

**Table 9.** Monitoring objectives and final report status for implementation phase watershed projects funded under the FY 99 Consolidated Grant - July 1, 1999 thru October 31, 2002

| Project Name | Project Period | Final Report Status | Monitoring Focus/Variables Being Evaluated |
|---|---|---|---|
| Mirror Lake Watershed | 3/98 - 6/05 | Due 6/05 | AGNPS modeling, in-lake concentration trends & eutrophic status, and in-stream loading to the lake. Variables include FCB, TSS, N, P, DO, temperature, chlorophyl a, and secchi disk. |
| Hay Creek - Phase III | 3/99 - 6/01 | Water quality report complete 6/02 | A final report on the water quality data collected during Phase III was received in 7/02. Tentative plans are to complete a full final report addressing all Phases of the Hay Creek project. This final report will be due upon completion of Phase V. For Phase III, the Monitoring Focus & Variables were: In-stream pollutant concentration trends, riparian condition, and macroinvertebrates. Variables include temperature, DO, pH, secchi disk, conductivity, P, N, TSS, FCB, riparian health. |
| Griggs Co. Water Quality Improvement | 7/96 - 6/04 | Due 6/04 | In-stream concentration trends; loading at two USGS stations; macroinvertebrates; and acreage of applied BMP. Variables include FCB, N, P and TSS. |
| Cottonwood Creek Watershed | 3/97 - 6/06 | Due 6/06 | In-stream loading to the reservoir, in-lake concentration trends & eutrophic status, pollutant discharge from the reservoir, and acreage of applied BMP. Variables include FCB, TSS, N, P, DO, temperature, secchi disk, and chlorophyl a. |
| Beaver Creek Watershed | 7/97 - 6/04 | Due 6/04 | In-stream concentration trends, fish/macroinvertebrates, and acreage of applied BMP. Variables include FCB, TSS, N and P. |

| Project Name | Project Period | Final Report Status | Monitoring Focus/Variables Being Evaluated |
|---|---|---|---|
| Antelope Creek Watershed | 7/98 - 6/01 | Complete 6/01 | This project was discontinued, effective 7//1/01. As a "discontinued project" the last annual report is considered the project's final report. Monitoring data collected during the shortened project period is on file with the NDDH. Data collected included; in-stream concentration trends, fish/macroinvertebrates, and acreage of applied BMP. Water quality variables included N, FCB, TSS and P. |
| Renwick Watershed | 3/98 - 6/01 | Complete 7/01 | Riparian restoration and acreage of applied BMP. Photomonitoring was used to evaluate riparian site restoration. |
| Phase II - Red River Riparian Project | 3/98 - 6/03 | Due 6/03 | Riparian restoration is the focus of the project. Recovery of select sites will be documented through photomonitoring and vegetation inventories (e.g., Greenline method, etc.) |
| Cedar Lake Watershed | 3/99 - 6/04 | Due 6/04 | In-stream loadings to the reservoir, in-lake concentrations trends, and acreage of applied BMP. Variables include P, N, TSS, FCB, DO, temperature, secchi disk, and chlorophyl a. |
| Pipestem Creek Watershed | 5/95 - 6/00 | Complete 6/01 | In-stream concentration trends and acreage of applied BMP. Variables included N, P, TSS, and FCB. |
| Upper Sheyenne Watershed | 7/96 - 6/05 | Due 6/05 | In-stream concentration trends; in-lake trophic status; macroinvertebrates; and acreage of applied BMP. Variables include DO; temperature; chlorophyl-a; TSS, N, P, and FCB. |
| Wild Rice WRAS | 10/99 - 6/04 | Due 6/04 | In-stream concentration trends, macroinvertebrates, and acreage of applied BMP. Variables include TSS, N, P, and FCB |
| Crooked Creek Watershed | 2/01 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB |
| Chanta Peta Watershed | 2/01 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB |
| Middle Cedar Watershed | 2/01 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB |

| Project Name | Project Period | Final Report Status | Monitoring Focus/Variables Being Evaluated |
|---|---|---|---|
| Sheyenne River WRAS (Barnes Co.) | 4/01 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and acreage of applied BMP. Water quality variables TSS, N, P, and FCB. |
| Maple River WRAS | 10/00 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, and AGNPS modeling (acreage of applied BMP). Water quality variables include TSS, N, P, and FCB |
| Buffalo Springs & Lightening Creek Watersheds | 4/01 - 6/06 | Due 6/06 | In-stream concentration trends, stream stage/flow, macroinvertebrates, riparian condition, and acreage of applied BMP. Water quality variables include TSS, N, P, and FCB |
| Lower Pipestem Creek Watershed | 4/02 - 6/05 | Due 6/05 | In-stream concentration trends, stream stage/flow, macroinvertebrates, targeted AGNPS modeling; and watershed wide acreage of applied BMP. Water quality variables include TSS, N, P, and FCB |
| Rocky Run Watershed - Phase II | 4/00 - 6/07 | Due 6/07 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and AGNPS modeling. Water quality variables include TSS, N, P, and FCB |
| Hay Creek - Phases IV & V | 4/01 - 6/04 | Due 6/04 | In-stream concentration trends, stream stage/flow, macroinvertebrates, and riparian condition. Water quality variables include temperature, DO, pH, secchi disk, conductivity, P, N, TSS, and FCB |

FCB - fecal coliform bacteria; N - nitrogen constituents; TSS - total suspended solids; P - total phosphorus; DO - dissolved oxygen

Feedback from local project sponsors does indicate that the NPS Program is successfully addressing the sources and causes of NPS pollution within most project areas. This short term evaluation is based on annual report information related to landuse improvements and BMP's applied within the project areas. Typically, the BMP's being applied within the watershed project areas include conservation tillage, livestock grazing systems; riparian buffers/restorations; and nutrient management. Cumulatively, these cropland and grazing land BMP have been applied on thousands of acres within in the project areas to reduce or prevent the transport of sediments and nutrients to waters of the state. Installation of livestock manure management facilities has also increased significantly over the past three. Through Section 319 financial support provided under the FY 99 Consolidated Grant, sixteen manure management systems have been installed, to date and another 20 facilities are scheduled for design and installation in 2003. Overall, the successful application of BMP's with the project areas can be attributed to strong local commitments to address water quality concerns, effective state and local educational efforts; increased emphasis on manure management; technical assistance for farm unit planning; and readily available engineering assistance delivered by the Section 319 NPS BMP Teams.

Over the long term water quality and biological data collected within the project areas will be used to directly measure the benefits of applied BMP's. Preliminary reviews of water quality data and other monitoring data collected, to date, does indicate that local efforts may be having a positive impact on water quality within some project areas. These encouraging results are typically most evident in the watershed project areas that have been active for more than five years and addressed over 40% of the watershed acreage/priority areas. Consequently, it appears accurate evaluation of beneficial use and/or water quality improvements, particularly within large watersheds, may need to occur over a 10 - 15 year time frame. Over this extended time frame, data interpretation can be accomplished with a higher degree of confidence to ensure that factors such as climatic variability and the delayed benefits of applied BMP are captured and addressed in the final project reports. During the interim, the project specific annual reports in the GRTS are used to the track and evaluate the progress of all projects supported with Section 319 funds.

Overall, the NPS Program has continued to realize an increasing number of NPS pollution control projects each year. This upward trend for NPS project start-ups is in itself significant evidence that NPS pollution management has become a priority resource issue across the state. Although sufficient data is currently not available to accurately document a statewide reduction in NPS pollution, information collected within local project areas has indicated that NPS pollution can be addressed on a watershed-by-watershed basis through the voluntary application of BMP. Consequently, as the number of local NPS projects increases, statewide NPS pollution reductions should begin to be realized. Feedback through the I/E projects and private citizens has also indicated that the general public's understanding of NPS pollution issues in the state has increased in recent years. Given the increased public awareness, local watershed project accomplishments, and positive trends within some of the local project areas, the NPS Program should be able to attain the long-term goals of the updated NPS Management Plan.

**A. Evaluation Objective & Task Accomplishments**

**Objective 1:** Assess and document beneficial use impairments in the state's surface and ground water resources resulting from NPS pollution and, to the extent possible, identify current and future sources and causes of the use impairments or threats.

> **Task 1:** Utilize the most current data and information to update the NPS Assessment Report and biennial Water Quality Assessment Report (i.e. Section 305(b) Report). *[**Product:** Updates to the NPS Assessment Report every five years and biennial updates to the Section 305(b) Report; **Milestone:** April 2000, 2002, etc. for the biennial Section 305(b) Report; October 1999, 2004, etc. for the NPS Assessment Report.]*
>
> > On Schedule - Updates to the 305(b) Report have been completed as scheduled. With the 305(b) Report; local NPS Assessment Reports; TMDL's; and the UWA meeting Program needs for documenting NPS trends/concerns, revisions to the statewide NPS Assessment Report have been discontinued. The watershed-specific NPS Assessment Reports and/or TMDL's developed during the

assessment phase of local projects are also being utilized to identify management measures needed to restore and maintain impaired beneficial uses.

**Objective 2:** Maintain effective delivery of the NPS Program by conducting periodic reviews of Program accomplishments.

**Task 2:** (Revised 10/02) Develop a process for Task Force evaluation of NPS Management Program accomplishments. *[**Product:** Task Force evaluation worksheets based on the goals, objectives, and tasks identified in the updated NPS Pollution Management Plan; **Milestone:** (Revised) December 2004.]*

On Schedule - To allow sufficient time for the full implementation and a more accurate evaluation of the updated NPS Management Plan, the first Task Force review has been rescheduled for January/February 2005. During this initial review, the Task Force members will utilize information provided in the Annual Program Reports to evaluate progress and identify any necessary revisions to the current NPS Management Plan. The criteria/process for this review will be finalized in December 2004.

**Task 3:** Establish annual performance measures for NPS Management Program staff which are based on the goals, objectives, and tasks identified in the updated NPS Pollution Management Plan and NPS Pollution Management Base Program Workplan. *[**Product:** Annual performance measures for NPS Management Program Staff; **Milestone:** July 1999, 2000, 2001, etc.]*

On Schedule - Completed annually by the Surface Water Program Manager.

**Task 4:** (Revised 10/02) Provide the appropriate information to the Task Force to complete reviews of NPS Management Program progress on a five year cycle. *[**Product:** Reports to the Task Force on specific Program accomplishments; Annual GRTS updates on the Program; Task Force evaluation of the Program and recommendations for updates; **Milestone:** (Revised) Task Force reviews and update recommendations every fifth year - The first Task Force review will occur in January/February 2005; subsequent reviews will occur in 2010, 2015, etc.; Annual GRTS updates - March/November; The first GRTS updates based on the updated NPS Pollution Management Plan were completed in November 1999.]*

On Schedule - The first Task Force review is scheduled for January/February 2005. The GRTS has been updated annually in March and November.

**Task 5:** (Revised 10/02) When appropriate, distribute information and assessment data on future NPS pollution threats to the Task Force to obtain their recommendations on NPS Management Program Plan revisions needed to address new threats to water quality.

*[**Product:** Periodic Task Force reviews of available information on resource management changes occurring in the state and the potential future NPS pollution threats associated with the changes. - Task Force recommendations on NPS Management Program Plan updates or revisions; **Milestone:** (Revised) Dissemination of assessment data and information on potential/new NPS pollution threats will be an ongoing activity. As data and information becomes available, input will be solicited from the Task Force.]*

On Schedule - Since the approval of the current NPS Management Plan, no new or potential NPS pollution threats have been identified.

**Task 6:** Solicit feedback from local project sponsors regarding delivery of NPS Program assistance. *[**Product:** Comments and recommendations through discussions during annual project sponsor and staff workshop; **Milestone:** March 1999, 2000, 2001, etc.]*

On Schedule - Local sponsor feedback is provided through the annual and semiannual project reports. Feedback received in FY2002 is provided in the project-specific reports in the GRTS.

**Task 7:** (Revised 10/02) Review and update the NPS Pollution Management Program Plan on a five year cycle. *[**Product:** Management Plan reviews and updates, as needed, every five years; Minor updates may also be needed more frequently to address interim Task Force recommendations; unavoidable delays; funding limitations; and local feedback; **Milestone:** October 1999, 2005, 2010, etc.]*

On Schedule - To allow sufficient time for full implementation of the objectives and tasks in the current Management Plan, the first Task Force review of the Management Plan has been rescheduled for 2005. — Since approval of the Management Plan in 1999, minor revisions have been completed to address unexpected delays and funding limitations. Specific Tasks or Objectives that have been revised are identified in the annual NPS Program reports. These revisions have been identified by including a revised date (e.g., Revised 10/02) in the applicable Task or Objective statements. Following the first scheduled Task Force review in 2005, all these "interim revisions" will be incorporated into the Management Plan and the a revised Plan will be forwarded to EPA for final review and approval.

**Objective 3:** Evaluate local NPS project progress toward goals identified in the PIP's

**Task 8:** Maintain an annual reporting schedule for local NPS Projects. *[**Product:** Semiannual and annual reports on project status and specific task accomplishments. -- 30 - 40 semiannual and annual project reports per year; **Milestone**: Semiannual reports are due in March; Annual reports are due in November.]*

On Schedule - Semiannual and annual project report guidelines have been developed and distributed to the local sponsors. These guidelines were developed to ensure consistent reporting from the local projects and compatibility with GRTS reporting requirements. All active projects have submitted their FY2002 annual and semiannual reports on schedule. Refer to the GRTS for specific project reports.

**Task 9:** Review and summarize water quality and land use data collected according to project-specific QAPPs within the watershed project areas to define pre-project conditions and evaluate progress in meeting project goals and objectives at the end of the project period and beyond. *[**Product:** For each project ---Report on baseline water quality and beneficial use conditions and a final report assessing the water quality and beneficial use improvements related to project activities. The number of reports annually will be dependant on project start-ups and completions; **Milestone:** The schedule for completing reports for each project will be identified in the milestones of each project's QAPP and/or PIP.]*

On Schedule - See information provided in Sections II and IV. All water quality data collected within the project areas has been entered in STORET.

**Task 10:** Provide annual and semiannual updates on local project progress to EPA Region VIII. *[**Product:** Semiannual and annual updates to the GRTS; **Milestone:** Semiannual report in March; Annual report in November.]*

On Schedule - All FY 2002 semiannual and annual project reports have been entered in the GRTS.